STIC Search Report
Biotech-Chem Library

STIC Database Tracking Number: 132735

TO: Maury Audet
Location: rem/3d20/3c18
Art Unit: 1654
Thursday, September 16, 2004

Case Serial Number: 09/876304

From: Noble Jarrell
Location: Biotech-Chem Library
Rem 1B71
Phone: 272-2556

Noble.jarrell@uspto.gov

Search Notes

L Number	Hits	Search Text	DB	Time stamp
1	1	204/451.ccls. and dipeptide SAME chiral SAME micelle	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/16 12:56
2	1	204/455.ccls. and dipeptide SAME chiral SAME micelle	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/16 12:57
3	0	530/415.ccls. and dipeptide SAME chiral SAME micelle	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/16 12:57
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-	1	6270640.pn. and hydrocarbon	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/02/26 09:33
-	1	6270640.pn. and undecylenyl	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/02/26 09:33
-	2	6270640.pn.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/24 04:46
-	2	5770084.pn.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/24 04:50
-	2	6090250.pn.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/24 04:50
-	2	6013738.pn.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/24 04:56
-	358	micelle and dipeptide	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/24 04:56
-	38	micelle and dipeptide and chiral	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/24 04:56
-	31	micelle and dipeptide and chiral and polymer	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/24 04:57
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-	15	micelle and dipeptide and chiral and polymer and valine and leucine and surfactant	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/24 04:57
-	2	micelle and dipeptide and chiral and polymer and valine and leucine and surfactant and undecylenyl	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/12/10 12:07

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-	0	undecylenyl and 514/44.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/24 04:59
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-	4	undecylenyl and 210/635.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/24 05:00
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-	3	composition and micelle and dipeptide and D-Leucine	USPAT; US-PGPUB	2003/03/24 06:06
-	3	micelle and dipeptide and D-Leucine	USPAT; US-PGPUB	2003/03/24 06:07
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-	5	Warner.in. and micelle and D and polymer	USPAT; US-PGPUB	2003/03/24 06:09
-	5	Warner.in. and micelle and D and polymer and composition	USPAT; US-PGPUB	2003/03/24 06:10
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-	335	micelle and dipeptide and D	USPAT; US-PGPUB	2003/03/24 06:15
-	33	micelle and dipeptide and D and composition and co-polymer	USPAT; US-PGPUB	2003/03/24 06:16
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-	103	undecylenyl and hydrocarbon	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/12/10 13:32
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-	3	undecylenyl and warner.in. and hydrocarbon	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/12/10 13:33
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-	1	530/415.ccls. and dipeptide and chiral	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/05/16 09:32
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-	2	204/451.ccls. and dipeptide SAME chiral and micelle	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/05/16 09:36
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     FILE 'HCAPLUS' ENTERED AT 15:08:43 ON 16 SEP 2004
L1           1 US20010051703/PN

     FILE 'REGISTRY' ENTERED AT 15:09:04 ON 16 SEP 2004

     FILE 'HCAPLUS' ENTERED AT 15:09:06 ON 16 SEP 2004
L2             TRA L1 1- RN :       10 TERMS

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L3           10 SEA L2

     FILE 'WPIX' ENTERED AT 15:09:08 ON 16 SEP 2004
L4           1 US20010051703/PN

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FILE COVERS 1907 - 16 Sep 2004  VOL 141 ISS 12
FILE LAST UPDATED: 15 Sep 2004  (20040915/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.


=> d all l1

L1   ANSWER 1 OF 1  HCAPLUS  COPYRIGHT 2004 ACS on STN
AN   2001:576060  HCAPLUS
DN   135:153248
ED   Entered STN:  09 Aug 2001
TI   Polymerized oligopeptide-surfactant chiral micelles
IN   Warner, Isiah M.; Billiot, Eugene J.; Shamsi, Shahab A.; Thibodeaux,
     Stefan J.
PA   Board of Supervisors of Louisiana State University and Agricultural and
     Mechanical College, USA
SO   U.S., 22 pp.
     CODEN: USXXAM
DT   Patent
LA   English
IC   ICM  G01N027-26
     ICS  B01D011-00; B01D011-04; B01D005-08
NCL  204451000
CC   35-4 (Chemistry of Synthetic High Polymers)
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.         DATE
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PI   US 6270640          B1     20010807    US 1999-296351          19990422
     US 2001051703       A1     20011213    US 2001-876304          20010607 <--
PRAI US 1998-126431P     P      19980429
     US 1999-296351      A3     19990422
CLASS
 PATENT NO.      CLASS  PATENT FAMILY CLASSIFICATION CODES
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 US 6270640      ICM    G01N027-26
                 ICS    B01D011-00; B01D011-04; B01D005-08
                 NCL    204451000
AB   Chiral sepns. can be enhanced through the use of polymerized
     dipeptide-surfactant or oligopeptide-surfactant chiral micelles.  Because
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polymerized micelles eliminate much of the complex dynamic behavior associated with conventional micelles, polymerized chiral micelles have stronger chiral recognition properties than do otherwise-identical, "conventional" or non-polymerized chiral micelles. Recovery of chiral ligands from polymerized chiral micelles is often easier, as the chiral ligands may typically be recovered by simple extraction with an appropriate organic solvent. By contrast, recovering the solute from a conventional, non-polymerized micellar medium by extraction with an organic solvent frequently results in the formation of troublesome emulsion systems. Polymerized chiral micelle systems are therefore beneficial in both preparative-scale and process-scale sepns. Polymerized chiral micelles have no critical micelle concentration, allowing lower concns. to be used in micellar electrokinetic capillary chromatog., which in turn reduces the otherwise deleterious heat that can be generated. Many polymerized dipeptide-surfactant or oligopeptide-surfactant chiral micelles have superior separation properties as compared to polymerized amino acid-surfactant chiral micelles. Poly(sodium N-undecylenyl-L-valine-L-valine) was used in electrokinetic chromatog.

ST polymd oligopeptide surfactant chiral micelle enantiomer sepn

IT Capillary electrophoresis
Liquid chromatography
(polymerized oligopeptide-surfactant chiral micelles)

IT 192448-35-4P 204689-90-7P 204689-91-8P 204689-92-9P 243843-88-1P
352711-88-7P 352711-90-1P 352711-92-3P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polymerized oligopeptide-surfactant chiral micelles)

IT 602-09-5, (.+-.)1,1'-Bi-2-naphthol 35193-63-6
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(polymerized oligopeptide-surfactant chiral micelles)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Anon; JP 4149205 1992
(2) Anon; JP 4149206 1992
(3) Armstrong, D; Anal Chem 1987, V59, P84A HCAPLUS
(4) Shahab, A; Analytical Chemistry 1997, V69(15)
(5) Warner; US 5770084 1998 HCAPLUS

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FILE 'REGISTRY' ENTERED AT 15:09:38 ON 16 SEP 2004

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 15 SEP 2004 HIGHEST RN 745743-57-1
DICTIONARY FILE UPDATES: 15 SEP 2004 HIGHEST RN 745743-57-1

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> d ide l3 tot

L3 ANSWER 1 OF 10 REGISTRY COPYRIGHT 2004 ACS on STN
RN **352711-92-3** REGISTRY
CN D-Leucine, N-(1-oxo-10-undecenyl)-D-valyl-, homopolymer (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF (C22 H40 N2 O4 . Na)x
CI PMS
PCT Polyvinyl
SR CA
LC STN Files: CA, CAPLUS, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation); USES (Uses)

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CRN 352711-91-2 (732238-06-1)
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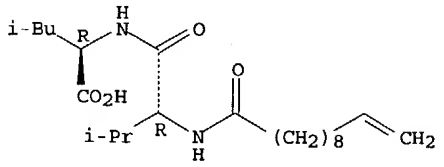
Absolute stereochemistry.



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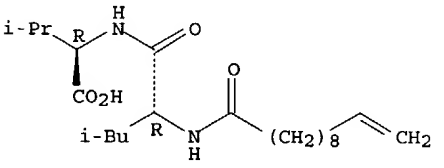
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 2 OF 10 REGISTRY COPYRIGHT 2004 ACS on STN
RN **352711-90-1** REGISTRY
CN D-Valine, N-(1-oxo-10-undecenyl)-D-leucyl-, monosodium salt, homopolymer (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF (C22 H40 N2 O4 . Na)x
CI PMS
PCT Polyvinyl
SR CA
LC STN Files: CA, CAPLUS, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation); USES (Uses)

CM 1

CRN 352711-89-8
CMF C22 H40 N2 O4 . Na

Absolute stereochemistry.



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1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 3 OF 10 REGISTRY COPYRIGHT 2004 ACS on STN
RN **352711-88-7** REGISTRY
CN D-Valine, N-(1-oxo-10-undecenyl)-D-valyl-, homopolymer (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF (C21 H38 N2 O4 . Na)x
CI PMS
PCT Polyvinyl
SR CA
LC STN Files: CA, CAPLUS, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation); USES (Uses)

CM 1

CRN 352711-87-6

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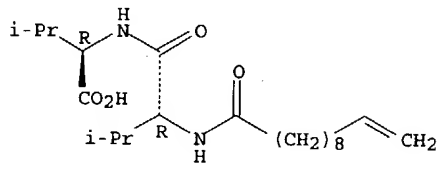
Absolute stereochemistry.



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1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 4 OF 10 REGISTRY COPYRIGHT 2004 ACS on STN
RN **243843-88-1** REGISTRY
CN D-Leucine, N-(1-oxo-10-undecenyl)-D-leucyl-, monosodium salt, homopolymer (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF (C23 H42 N2 O4 . Na)x
CI PMS
PCT Polyvinyl
SR CA
LC STN Files: CA, CAPLUS, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: ANST (Analytical study); PRP (Properties); USES (Uses)

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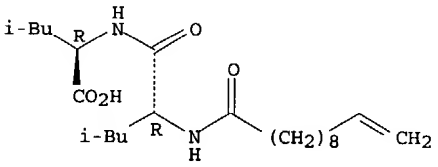
Absolute stereochemistry.



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3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 5 OF 10 REGISTRY COPYRIGHT 2004 ACS on STN
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CN L-Leucine, N-(1-oxo-10-undecenyl)-L-leucyl-, monosodium salt, homopolymer (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF (C23 H42 N2 O4 . Na)x
CI PMS
PCT Polyvinyl
SR CA
LC STN Files: CA, CAPLUS, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: ANST (Analytical study); PREP (Preparation); PRP (Properties); USES (Uses)

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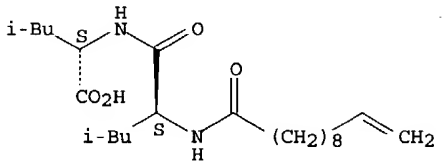
CRN 204689-89-4 (220928-26-7)

CMF C23 H42 N2 O4 . Na

Absolute stereochemistry. Rotation (-).



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6 REFERENCES IN FILE CA (1907 TO DATE)
6 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 6 OF 10 REGISTRY COPYRIGHT 2004 ACS on STN
RN **204689-91-8** REGISTRY
CN L-Valine, N-(1-oxo-10-undecenyl)-L-leucyl-, monosodium salt, homopolymer (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Poly(sodium N-undecanoyl-L-leucylvalinate)
FS STEREOSEARCH
MF (C22 H40 N2 O4 . Na)x
CI PMS
PCT Polyvinyl
SR CA
LC STN Files: CA, CAPLUS, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: ANST (Analytical study); PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: ANST (Analytical study); PREP (Preparation); PRP (Properties); USES (Uses)

CM 1

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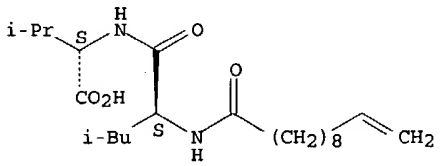
CMF C22 H40 N2 O4 . Na

Absolute stereochemistry.



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7 REFERENCES IN FILE CA (1907 TO DATE)
7 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 7 OF 10 REGISTRY COPYRIGHT 2004 ACS on STN
RN **204689-90-7** REGISTRY
CN L-Leucine, N-(1-oxo-10-undecenyl)-L-valyl-, monosodium salt, homopolymer (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF (C22 H40 N2 O4 . Na)x
CI PMS
PCT Polyvinyl
SR CA
LC STN Files: CA, CAPLUS, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: ANST (Analytical study); PREP (Preparation); PRP (Properties); USES (Uses)

CM 1

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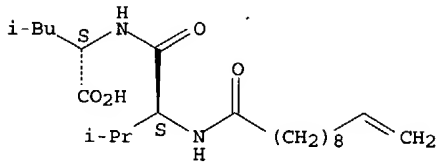
Absolute stereochemistry.



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4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 8 OF 10 REGISTRY COPYRIGHT 2004 ACS on STN
RN **192448-35-4** REGISTRY
CN L-Valine, N-(1-oxo-10-undecenyl)-L-valyl-, monosodium salt, homopolymer (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF (C21 H38 N2 O4 . Na)x
CI PMS
PCT Polyvinyl
SR CA
LC STN Files: CA, CAPLUS, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: ANST (Analytical study); PREP (Preparation); USES (Uses)

CM 1

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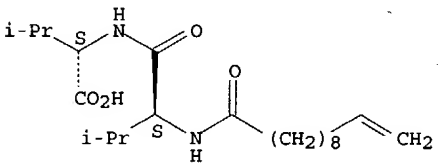
Absolute stereochemistry. Rotation (-).



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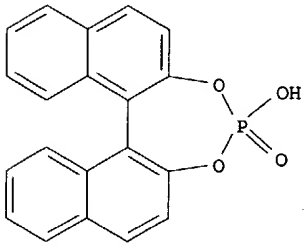
4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 9 OF 10 REGISTRY COPYRIGHT 2004 ACS on STN
RN **35193-63-6** REGISTRY
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-, 4-oxide (9CI) (CA INDEX NAME)
OTHER NAMES:
CN (.+-.)-1,1'-Binaphthyl-2,2'-diyl hydrogen phosphate
CN (.+-.)-1,1'-Dinaphthyl-2,2'-diyl hydrogen phosphate
CN (RS)-1,1'-Bi-2-naphthol-2,2'-diyl hydrogen phosphate
CN (RS)-1,1'-Binaphthyl-2,2'-diyl hydrogen phosphate
CN 1,1'-Binaphthyl-2,2'-diyl hydrogen phosphate
CN BNDHP
CN NSC 244999
DR 50574-52-2
MF C20 H13 O4 P
CI COM

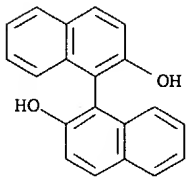
LC STN Files: ANABSTR, BEILSTEIN*, BIOSIS, CA, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, IFICDB, IFIPAT, IFIUDB, MEDLINE, MSDS-OHS, SPECINFO, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: ANST (Analytical study); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
RLD.P Roles for non-specific derivatives from patents: PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)



131 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
131 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 10 OF 10 REGISTRY COPYRIGHT 2004 ACS on STN
RN **602-09-5** REGISTRY
CN [1,1'-Binaphthalene]-2,2'-diol (8CI, 9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1,1'-Bi-2-naphthol (6CI, 7CI)
OTHER NAMES:
CN (.+-.)-1,1'-Bi-2-naphthol
CN (.+-.)-1,1'-Binaphthalene-2,2'-diol
CN (.+-.)-1,1'-Binaphthyl-2,2'-diol
CN (.+-.)-2,2'-Dihydroxy-1,1'-binaphthalene
CN (.+-.)-2,2'-Dihydroxy-1,1'-binaphthyl
CN (.+-.)-2,2'-Dihydroxy-1,1'-dinaphthyl
CN (.+-.)-Bi-.beta.-naphthol
CN (.+-.)-Binol
CN (.+-.)-[1,1'-Binaphthalene]-2,2'-diol
CN (RS)-1,1'-Bi-2,2'-naphthol
CN (RS)-1,1'-Bi-2-naphthol
CN .alpha.-Binaphthyl-2,2'-diol
CN .beta.-Binaphthol
CN 1,1'-Bi(.beta.-naphthol)
CN 1,1'-Binaphthyl-2,2'-diol
CN 1,1'-Bis-2-naphthol
CN 2,2'-Dihydroxy-1,1'-binaphthalene
CN 2,2'-Dihydroxy-1,1'-binaphthyl
CN 2,2'-Dihydroxy-1,1'-dinaphthyl
CN 2,2'-Dihydroxybinaphthalene
CN 2,2'-Dihydroxydinaphthyl
CN 2,2'-Dinaphthol
CN BINOL
CN Bis-.beta.-naphthol
CN NSC 27049
CN Racemic 2,2'-dihydroxy-1,1'-binaphthyl
FS 3D CONCORD
DR 41024-90-2
MF C20 H14 O2
CI COM
LC STN Files: ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MRCK*, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

Other Sources: EINECS**, NDSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)
DT.CA CAplus document type: Conference; Dissertation; Journal; Patent; Report
RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)
RLD.P Roles for non-specific derivatives from patents: BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)
RLD.NP Roles for non-specific derivatives from non-patents: ANST (Analytical study); FORM (Formation, nonpreparative); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1091 REFERENCES IN FILE CA (1907 TO DATE)
53 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1092 REFERENCES IN FILE CAPLUS (1907 TO DATE)
16 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> b wpix
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FILE LAST UPDATED: 15 SEP 2004 <20040915/UP>
MOST RECENT DERWENT UPDATE: 200459 <200459/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE, PLEASE VISIT:
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>>> NEW DISPLAY FORMAT HITSTR ADDED ALLOWING DISPLAY OF HIT STRUCTURES WITHIN THE BIBLIOGRAPHIC DOCUMENT <<<

=> d all l4

L4 ANSWER 1 OF 1 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2002-573539 [61] WPIX
CR 2001-564230 [63]
DNN N2002-454450 DNC C2002-162656
TI Separation of enantiomer mixture, comprises guiding enantiomers through medium or substrate containing polymerized dipeptide chiral micelles having differing affinities at different velocities.
DC A23 A97 B05 C03 E19 S03
IN BILLIOT, E J; SHAMSI, S A; THIBODEAUX, S J; WARNER, I M

PA (BILL-I) BILLIOT E J; (SHAM-I) SHAMSI S A; (THIB-I) THIBODEAUX S J; (WARN-I) WARNER I M
CYC 1
PI US 2001051703 A1 20011213 (200261)* 23 C08H001-00 <--
ADT US 2001051703 A1 Provisional US 1998-126431P 19980429, Div ex US 1999-296351 19990422, US 2001-876304 20010607
FDT US 2001051703 A1 Div ex US 6270640
PRAI US 1998-126431P 19980429; US 1999-296351 19990422; US 2001-876304 20010607
IC ICM C08H001-00
AB US2001051703 A UPAB: 20020924
NOVELTY - The enantiomers are guided through a medium or substrate comprising polymerized dipeptide chiral micelles. The micelles have differing affinities for the two enantiomers so as to move enantiomer, through the medium or substrate at different velocities.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for polymerized dipeptide chiral micelle.
USE - The method is used for the separation of enantiomeric mixtures in chemical analysis, pharmaceutical and agricultural applications.
ADVANTAGE - By using polymerized dipeptide or oligopeptide chiral surfactants, the chiral separation of many racemic mixtures is enhanced.
DESCRIPTION OF DRAWING(S) - The figure shows schematically the dynamic interactions associated with polymerized chiral micelles.
Dwg.1b/6
FS CPI EPI
FA AB; GI; DCN
MC CPI: A05-F03; A12-L04; A12-W11; B04-C01; B04-C03; B04-N04; B10-B03B; B11-B; B12-M09; C04-C01; C04-C03; C04-N04; C10-B03B; C11-B; C12-M09; E10-B03B1; E11-L; E11-Q01
EPI: S03-E13D

=> b home
FILE 'HOME' ENTERED AT 15:09:51 ON 16 SEP 2004

=>

=> b reg
FILE 'REGISTRY' ENTERED AT 15:51:09 ON 16 SEP 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 15 SEP 2004 HIGHEST RN 745743-57-1
DICTIONARY FILE UPDATES: 15 SEP 2004 HIGHEST RN 745743-57-1

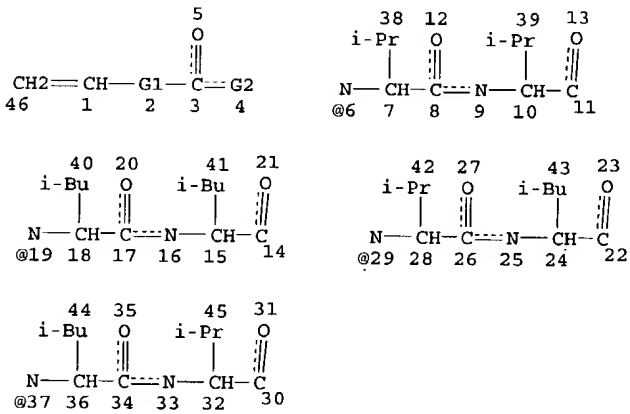
TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> d que stat l11
L9 STR



REP G1=(8-8) C
VAR G2=6/19/29/37
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 46

STEREO ATTRIBUTES: NONE
L11 35 SEA FILE=REGISTRY SSS FUL L9

100.0% PROCESSED 4257 ITERATIONS 35 ANSWERS
SEARCH TIME: 00.00.01

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FILE COVERS 1907 - 16 Sep 2004 VOL 141 ISS 12
FILE LAST UPDATED: 15 Sep 2004 (20040915/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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L1 1 US20010051703/PN

FILE 'REGISTRY' ENTERED AT 15:09:04 ON 16 SEP 2004

FILE 'HCAPLUS' ENTERED AT 15:09:06 ON 16 SEP 2004
L2 TRA L1 1- RN : 10 TERMS

FILE 'REGISTRY' ENTERED AT 15:09:06 ON 16 SEP 2004
L3 10 SEA L2

FILE 'WPIX' ENTERED AT 15:09:08 ON 16 SEP 2004
L4 1 US20010051703/PN

FILE 'REGISTRY' ENTERED AT 15:18:17 ON 16 SEP 2004
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L6 0 L5
L7 STR L5
L8 STR L7
L9 STR L8
L10 2 L9
L11 35 L9 FULL
SAVE TEMP AUD304/A L11

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L12 17 L11

FILE 'HCAOLD' ENTERED AT 15:44:52 ON 16 SEP 2004
L13 0 L11

FILE 'HCAPLUS' ENTERED AT 15:44:57 ON 16 SEP 2004
E WARNER I/AU
L14 323 E3-4,E11,E13
E BILLIOT E/AU
L15 31 E3-7
E SHAMSI S/AU
L16 73 E3,E7-10
E THIBODEAUX S/AU
L17 12 E3,E5-7
L18 17 L12 AND L14-17
L19 3 L12 AND (PY<=1998 OR AY<=1998 OR PRY<=1998 OR PD<19980429 OR AD
L20 3 L19 AND L14-17
L21 14 L18 NOT L20

=> b hcap
FILE 'HCAPLUS' ENTERED AT 15:51:22 ON 16 SEP 2004
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FILE COVERS 1907 - 16 Sep 2004 VOL 141 ISS 12
FILE LAST UPDATED: 15 Sep 2004 (20040915/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d all fhitstr hitrn l21 tot

L21 ANSWER 1 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:372400 HCAPLUS
DN 140:385264
ED Entered STN: 07 May 2004
TI Analytical separations with polyelectrolyte layers, molecular micelles, or zwitterionic polymers
IN **Warner, Isiah M.**; Schlenoff, Joseph B.; Kapnissi, Constantina P.; Kamande, Mary W.; Valle, Bertha C.
PA USA
SO U.S. Pat. Appl. Publ., 24 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM G01N027-26
NCL 204454000; 204601000
CC 80-4 (Organic Analytical Chemistry)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2004084312	A1	20040506	US 2002-283471	20021030
PRAI US 2002-283471		20021030		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004084312	ICM	G01N027-26
	NCL	204454000; 204601000

AB Polymeric surfactants (mol. micelles) are disclosed for use in open tubular capillary electrochromatog. or in HPLC. For example, fused silica capillaries are coated with thin films of charged polymers in a polyelectrolyte multilayer (PEM). A PEM coating may be formed in situ by alternate rinses with pos. and neg. polyelectrolytes. At least the innermost of the neg. charged polymer layers is a mol. micelle. Prototype embodiments have successfully separated seven benzodiazepines from one another. The run-to-run, day-to-day, week-to-week and capillary-to-capillary reproducibilities were very good, with relative standard deviation values <0.01. The PEM-coated capillary was very robust over at least 200 runs. Stability against high and low pH values was also observed Using chiral polymerized micelles, chiral sepns. may be achieved, as was demonstrated with a separation of the enantiomers of 1,1'-binaphthyl-2,2'-dihydrogenphosphate. Alternatively, layers for use in this invention may be formed from zwitterionic polymers in lieu of sep. cationic and anionic layers. Zwitterionic polymer layers may be used either with or without mol. micelles.
ST chromatog polyelectrolyte micelle zwitterionic polymer
IT Polyamides, analysis
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(acrylic; methods and apparatus for anal. sepns. with polyelectrolyte layers, mol. micelles, or zwitterionic polymers)
IT Resolution (separation)
(chromatog.; methods and apparatus for anal. sepns. with polyelectrolyte layers, mol. micelles, or zwitterionic polymers)
IT Capillary electrochromatography
Chromatographic stationary phases
Coating materials
Enantiomers
Ionic liquids
Micelles
Multilayers
Polyelectrolytes
(methods and apparatus for anal. sepns. with polyelectrolyte layers, mol. micelles, or zwitterionic polymers)
IT Peptides, analysis
Phenols, analysis
RL: ANT (Analyte); ANST (Analytical study)
(methods and apparatus for anal. sepns. with polyelectrolyte layers, mol.

micelles, or zwitterionic polymers)

IT Ionene polymers
Polyamines
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(methods and apparatus for anal. sepns. with polyelectrolyte layers, mol. micelles, or zwitterionic polymers)

IT Acrylic polymers, analysis
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(polyamide-; methods and apparatus for anal. sepns. with polyelectrolyte layers, mol. micelles, or zwitterionic polymers)

IT Carboxylic acids, analysis
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(polycarboxylic, salts; methods and apparatus for anal. sepns. with polyelectrolyte layers, mol. micelles, or zwitterionic polymers)

IT Sulfonic acids, analysis
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(salts; methods and apparatus for anal. sepns. with polyelectrolyte layers, mol. micelles, or zwitterionic polymers)

IT 50-56-6, Oxytocin, analysis 58-82-2, Bradykinin 106-44-5, 4-Methylphenol, analysis 106-48-9, 4-Chlorophenol 108-43-0, 3-Chlorophenol 108-68-9, 3,5-Dimethylphenol 108-95-2, Phenol, analysis 113-79-1 146-22-5, Nitrazepam 371-41-5, 4-Fluorophenol 439-14-5, Diazepam 591-20-8, 3-Bromophenol 604-75-1, Oxazepam 846-49-1, Lorazepam 846-50-4, Temazepam 1622-61-3, Clonazepam 1622-62-4, Flunitrazepam 9034-40-6, Luteinizing hormone releasing hormone 23815-89-6, 1-5-Bradykinin 31362-50-2, Bombesin 33507-63-0, Substance P (peptide) 35193-63-6 35193-64-7 39648-67-4 58569-55-4, Methionine enkephalin 58822-25-6, Leucine enkephalin
RL: ANT (Analyte); ANST (Analytical study)
(methods and apparatus for anal. sepns. with polyelectrolyte layers, mol. micelles, or zwitterionic polymers)

IT 3637-26-1, 3-Dimethyl methacryloyloxyethylammonium propanesulfonate 8062-15-5D, Lignosulfonic acid, sulfonated derivs., analysis 9000-07-1, Carrageenan 9002-98-6, Polyethylenimine 9003-01-4, Poly (acrylic acid) 9003-47-8D, Poly(vinylpyridine), N-alkyl derivs. 9017-80-5, Poly (vinylbenzyltrimethylammonium chloride) 9042-14-2, Dextran sulfate 25087-26-7, Poly (methacrylic acid) 25609-94-3 26062-79-3, Poly(diallyldimethylammonium chloride) 26101-52-0, Poly (ethylenesulfonic acid) 27119-07-9, Poly(2-acrylamido-2-methyl-1-propanesulfonic acid) 28728-55-4, Polybrene 29382-27-2 31694-16-3D, sulfonated derivs. 50851-57-5, Poly(styrenesulfonic acid) 54076-97-0 60676-86-0, Vitreous silica 71550-12-4, Poly(allylaminehydrochloride) 145228-96-2 155371-19-0 163934-78-9 174501-65-6, 1-Butyl-3-methylimidazolium tetrafluoroborate **204689-91-8** 243843-98-3 683204-67-3
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(methods and apparatus for anal. sepns. with polyelectrolyte layers, mol. micelles, or zwitterionic polymers)

IT 110661-49-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(methods and apparatus for anal. sepns. with polyelectrolyte layers, mol. micelles, or zwitterionic polymers)

IT 163934-77-8P **204689-88-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(methods and apparatus for anal. sepns. with polyelectrolyte layers, mol. micelles, or zwitterionic polymers)

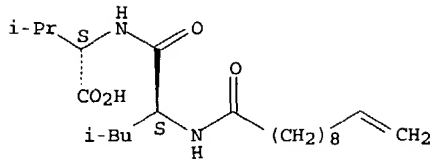
IT **204689-91-8**
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(methods and apparatus for anal. sepns. with polyelectrolyte layers, mol. micelles, or zwitterionic polymers)

RN 204689-91-8 HCAPLUS
CN L-Valine, N-(1-oxo-10-undecenyl)-L-leucyl-, monosodium salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 204689-88-3
CMF C22 H40 N2 O4 . Na

Absolute stereochemistry.



● Na

IT **204689-91-8**
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(methods and apparatus for anal. sepns. with polyelectrolyte layers, mol. micelles, or zwitterionic polymers)

IT **204689-88-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(methods and apparatus for anal. sepns. with polyelectrolyte layers, mol. micelles, or zwitterionic polymers)

L21 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:205417 HCAPLUS
DN 140:385239
ED Entered STN: 15 Mar 2004
TI Chiral recognition of binaphthyl derivatives using electrokinetic chromatography and steady-state fluorescence anisotropy: effect of temperature
AU Billiot, Fereshteh Haddadian; McCarroll, Matthew C.; **Billiot, Eugene J.; Warner, Isiah M.**
CS Department of Physical and Life Sciences, Texas A and M University-Corpus Christi, Corpus Christi, TX, USA
SO Electrophoresis (2004), 25(4-5), 753-757
CODEN: ELCTDN; ISSN: 0173-0835
PB Wiley-VCH Verlag GmbH & Co. KGaA
DT Journal
LA English
CC 80-4 (Organic Analytical Chemistry)
AB The effect of temperature on the chiral recognition of binaphthyl derivs. in the presence of poly sodium N-undecanoyl-LL-leucyl-leucinate (poly LL-SULL) was examined using electrokinetic chromatog. (EKC) and steady-state fluorescence anisotropy. An examination of the effect of temperature suggests that the chiral recognition of 1,1'-binaphthyl-2,2'-diol enantiomers improves with increasing temperature, whereas lower temps. resulted in better enantiosolectivity in the case of 1,1'-binaphthyl-2,2'-diyl hydrogen phosphate enantiomers. Steady-state fluorescence anisotropy results show that the anisotropy of the two enantiomers are different when complexed to poly-(LL) SULL. As would be expected, the enantiomer that binds stronger to the chiral pseudostationary phase, as evidenced by EKC expts., had higher anisotropy values. The results of this study suggest that steady-state fluorescence anisotropy can be used to gain further insight into chiral recognition.
ST binaphthyl deriv enantiosepn electrokinetic chromatog fluorescence anisotropy temp effect
IT Electrokinetic capillary chromatography
Fluorescence
Optical anisotropy
Temperature
(effect of temperature on chiral recognition of binaphthyl derivs. using electrokinetic chromatog. and steady-state fluorescence anisotropy)
IT Resolution (separation)
(electrophoretic; effect of temperature on chiral recognition of binaphthyl derivs. using electrokinetic chromatog. and steady-state fluorescence anisotropy)
IT 602-09-5, (.+-.)-1,1'-Binaphthyl-2,2'-diol
RL: ANT (Analyte); ANST (Analytical study)
(analyte; effect of temperature on chiral recognition of binaphthyl derivs. using electrokinetic chromatog. and steady-state fluorescence anisotropy)
IT 18531-94-7, (+)-1,1'-Binaphthyl-2,2'-diol 18531-99-2, (-)-1,1'-Binaphthyl-2,2'-diol 35193-63-6, (.+-.)-1,1'-Binaphthyl-2,2'-

diyl hydrogen phosphate 35193-64-7, (+)-1,1'-Binaphthyl-2,2'-diyl hydrogen phosphate 39648-67-4, (-)-1,1'-Binaphthyl-2,2'-diyl hydrogen phosphate
RL: ANT (Analyte); ANST (Analytical study)
(effect of temperature on chiral recognition of binaphthyl derivs. using electrokinetic chromatog. and steady-state fluorescence anisotropy)

IT **243843-88-1** 685527-54-2
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(effect of temperature on chiral recognition of binaphthyl derivs. using electrokinetic chromatog. and steady-state fluorescence anisotropy)

IT **204689-92-9**
RL: ARU (Analytical role, unclassified); NUU (Other use, unclassified); ANST (Analytical study); USES (Uses)
(surfactant; effect of temperature on chiral recognition of binaphthyl derivs. using electrokinetic chromatog. and steady-state fluorescence anisotropy)

RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Billiot, E; Anal Chem 1998, V70, P1375 HCAPLUS
(2) Billiot, E; Anal Chem 1999, V71, P1252 HCAPLUS
(3) Billiot, E; Anal Chem 1999, V71, P4044 HCAPLUS
(4) Billiot, F; J Chromatogr A 2001, V922, P329 HCAPLUS
(5) Billiot, F; J Chromatogr A 2002, V950, P233
(6) Chankvetadze, B; Capillary Electrophoresis in Chiral Analysis 1997
(7) Haddadian, F; Electrophoresis 1999, V20, P3011 HCAPLUS
(8) Haddadian, F; J Chromatogr A 1999, V858, P395
(9) Kano, K; J Chem Soc Chem Commun 1989, P1278 HCAPLUS
(10) Lakowicz, J; Principles of Fluorescence Spectroscopy 1983
(11) Lapidot, Y; J Lipid Res 1967, V8, P142 HCAPLUS
(12) Lindner, W; J Chromatogr A 1995, V697, P549 HCAPLUS
(13) McCarroll, M; J Am Chem Soc 2001, V123, P3173 HCAPLUS
(14) Pirkle, W; Chem Rev 1989, V89, P347 HCAPLUS
(15) Tran, C; J Am Chem Soc 1980, V102, P2923 HCAPLUS
(16) Tundo, P; J Am Chem Soc 1980, V102, P1760 HCAPLUS
(17) Yarabe, H; J Anal Chem 1999, V71, P3992 HCAPLUS
(18) Yarabe, H; J Chromatogr A 2000, V875, P179 HCAPLUS

IT **243843-88-1**
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(effect of temperature on chiral recognition of binaphthyl derivs. using electrokinetic chromatog. and steady-state fluorescence anisotropy)

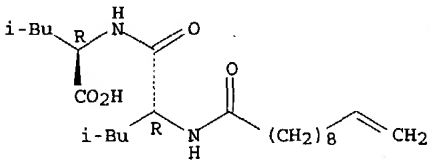
RN 243843-88-1 HCAPLUS

CN D-Leucine, N-(1-oxo-10-undecenyl)-D-leucyl-, monosodium salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 243843-87-0
CMF C23 H42 N2 O4 . Na

Absolute stereochemistry.



● Na

IT **243843-88-1**
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(effect of temperature on chiral recognition of binaphthyl derivs. using electrokinetic chromatog. and steady-state fluorescence anisotropy)

IT **204689-92-9**
RL: ARU (Analytical role, unclassified); NUU (Other use, unclassified); ANST (Analytical study); USES (Uses)
(surfactant; effect of temperature on chiral recognition of binaphthyl derivs. using electrokinetic chromatog. and steady-state fluorescence anisotropy)

L21 ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:779488 HCAPLUS
DN 139:390343
ED Entered STN: 06 Oct 2003
TI Chiral separations using polymeric surfactants and polyelectrolyte multilayers in open-tubular capillary electrochromatography
AU Kapnissi, Constantina P.; Valle, Bertha C.; **Warner, Isiah M.**
CS Department of Chemistry, Louisiana State University, Baton Rouge, LA, 70803, USA
SO Analytical Chemistry (2003), 75(22), 6097-6104
CODEN: ANCHAM; ISSN: 0003-2700
PB American Chemical Society
DT Journal
LA English
CC 80-4 (Organic Analytical Chemistry)
AB Fused-silica capillaries are modified using a polyelectrolyte multilayer (PEM) coating procedure in open-tubular capillary electrochromatog. The PEM coating was constructed in situ with alternating rinses of pos. and neg. charged polymers. The quaternary ammonium salt poly(diallyldimethylammonium chloride) was used as the cationic polymer, and the polymeric surfactant poly(sodium N-undecanoyl-L-leucylvalinate) was used as the anionic polymer. Previous studies showed that the PEM-coated capillaries used for achiral sepns. have excellent reproducibilities and high stabilities against extreme pH values. In the current study, this PEM coating approach was applied to chiral sepns. of 1,1'-binaphthyl-2,2'-dihydrogenphosphate (BNP), 1,1'-bi-2-naphthol, secobarbital, pentobarbital, and temazepam. However, the PEM coating procedure used in the achiral studies needed to be significantly modified to achieve chiral sepns. Optimal conditions were established by varying the additives (sodium chloride, 1-ethyl-3-methyl-1H-imidazolium hexafluorophosphate, 1-butyl-3-methylimidazolium tetrafluoroborate) in the polymer deposition solns., the salt concentration, the column temperature, and the bilayer number Reproducibilities were evaluated using the relative standard deviation values of the electroosmotic flow (EOF) and the 1st peak ((R)-(+)-BNP). In all cases, the run-to-run and capillary-to-capillary relative standard deviation values of EOF were <0.5%, and the run-to-run relative standard deviation values of the (R)-(+)-BNP peak were <1%. More than 230 runs were performed on a single PEM-coated capillary.
ST capillary electrochromatog chiral sepn polyundecanoylleucylvalinate Polydiallyldimethylammonium chloride multilayer present
IT Capillary electrochromatography
(chiral sepns. using polymeric surfactants and polyelectrolyte multilayers in open-tubular capillary electrochromatog.)
IT Resolution (separation)
(electrophoretic; chiral sepns. using polymeric surfactants and polyelectrolyte multilayers in open-tubular capillary electrochromatog.)
IT 7647-14-5, Sodium chloride, analysis 155371-19-0 174501-65-6, 1-Butyl-3-methylimidazolium tetrafluoroborate
RL: ARU (Analytical role, unclassified); NUU (Other use, unclassified); ANST (Analytical study); USES (Uses)
(additive; chiral sepns. using polymeric surfactants and polyelectrolyte multilayers in open-tubular capillary electrochromatog.)
IT 76-73-3, (.+-.)-Secobarbital 76-74-4, (.+-.)-Pentobarbital 602-09-5, (.+-.)-1,1'-Bi-2-naphthol 846-50-4, (.+-.)-Temazepam 5767-32-8, (-)-Pentobarbital 18531-94-7, (+)-1,1'-Bi-2-naphthol 18531-99-2, (-)-1,1'-Bi-2-naphthol 20224-45-7, (-)-Secobarbital 21045-50-1, (+)-Pentobarbital 22328-94-5, (+)-Secobarbital 35193-63-6 35193-64-7 39648-67-4 52432-56-1, (+)-Temazepam 52432-57-2, (-)-Temazepam
RL: ANT (Analyte); ANST (Analytical study)
(analyte; chiral sepns. using polymeric surfactants and polyelectrolyte multilayers in open-tubular capillary electrochromatog.)
IT 26062-79-3, Poly(diallyldimethylammonium chloride) **204689-91-8**, Poly(sodium N-undecanoyl-L-leucylvalinate)
RL: ARU (Analytical role, unclassified); NUU (Other use, unclassified); ANST (Analytical study); USES (Uses)
(chiral sepns. using polymeric surfactants and polyelectrolyte multilayers in open-tubular capillary electrochromatog.)
RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD
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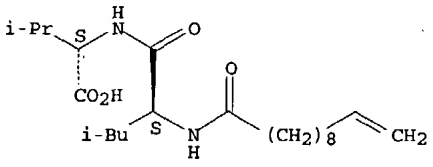
IT **204689-91-8**, Poly(sodium N-undecanoyl-L-leucylvalinate)
RL: ARU (Analytical role, unclassified); NUU (Other use, unclassified); ANST (Analytical study); USES (Uses)
(chiral sepns. using polymeric surfactants and polyelectrolyte multilayers in open-tubular capillary electrochromatog.)

RN 204689-91-8 HCAPLUS
CN L-Valine, N-(1-oxo-10-undecenyl)-L-leucyl-, monosodium salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 204689-88-3
CMF C22 H40 N2 O4 . Na

Absolute stereochemistry.



IT **204689-91-8**, Poly(sodium N-undecanoyl-L-leucylvalinate)
RL: ARU (Analytical role, unclassified); NUU (Other use, unclassified); ANST (Analytical study); USES (Uses)
(chiral sepns. using polymeric surfactants and polyelectrolyte multilayers in open-tubular capillary electrochromatog.)

L21 ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:1626 HCAPLUS
DN 138:197914
ED Entered STN: 03 Jan 2003
TI Polysodium N-Undecanoyl-L-leucylvalinate: A Versatile Chiral Selector for Micellar Electrokinetic Chromatography
AU **Shamsi, Shahab A.**; Valle, Bertha C.; Billiot, Fereshteh; **Warner, Isiah M.**
CS Department of Chemistry, Louisiana State University, Baton Rouge, LA, 70803, USA

SO Analytical Chemistry (2003), 75(3), 379-387
CODEN: ANCHAM; ISSN: 0003-2700
PB American Chemical Society
DT Journal
LA English
CC 80-4 (Organic Analytical Chemistry)
Section cross-reference(s): 64

AB Dipeptide micelle polymers are a new class of polymeric surfactants of which the polysodium undecanoyl-L-leucylvalinate (poly-L-SULV) is a broadly applicable chiral selector for micellar electrokinetic chromatog. This neg. charged dipeptide micelle polymer is a high mol. weight compound with large countercurrent mobility, zero critical micelle concentration, low aggregation number, and high solubility in water or water-organic solvents. In an extensive chiral screening program, enantiosepn. of 75 racemic compds. was tested with poly-L-SULV as chiral pseudostationary phase in neutral pH and basic pH background electrolytes. A total of 58 out of 75 racemic compds. could be resolved after choosing an appropriate concentration of poly-L-SULV. Although anionic chiral analytes are difficult to resolve using poly-L-SULV, the percent success rate for chiral resolution of cationic (77%) and neutral (85%) racemates was very high. Aspects regarding electrostatic, steric, hydrophobic, and hydrogen-bonding interactions of this dipeptide micelle polymer with various classes of chiral analytes are discussed.

ST sodium undecanoylleucylvalinate chiral selector micellar electrokinetic chromatog enantiomer resoln

IT Amino acids, analysis
RL: ANT (Analyte); ANST (Analytical study)
(PTH-derivs., analytes; poly(sodium undecanoylleucylvalinate) as versatile chiral selector for micellar electrokinetic chromatog.)

IT Alcohols, analysis
Aromatic compounds
RL: ANT (Analyte); ANST (Analytical study)
(analytes; poly(sodium undecanoylleucylvalinate) as versatile chiral selector for micellar electrokinetic chromatog.)

IT Micellar electrokinetic capillary chromatography
Pharmaceutical analysis
Resolution (separation)
(poly(sodium undecanoylleucylvalinate) as versatile chiral selector for micellar electrokinetic chromatog.)

IT 68107-81-3, (+)-Acebutolol
RL: ANT (Analyte); ANST (Analytical study)
((+)-acebutolol, analyte; poly(sodium undecanoylleucylvalinate) as versatile chiral selector for micellar electrokinetic chromatog.)

IT 57231-31-9, (+)-Laudanosoline
RL: ANT (Analyte); ANST (Analytical study)
((+)-laudanosoline, analyte; poly(sodium undecanoylleucylvalinate) as versatile chiral selector for micellar electrokinetic chromatog.)

IT 68107-82-4, (-)-Acebutolol
RL: ANT (Analyte); ANST (Analytical study)
((-)-acebutolol, analyte; poly(sodium undecanoylleucylvalinate) as versatile chiral selector for micellar electrokinetic chromatog.)

IT 57231-32-0, (-)-Laudanosoline
RL: ANT (Analyte); ANST (Analytical study)
((-)-laudanosoline, analyte; poly(sodium undecanoylleucylvalinate) as versatile chiral selector for micellar electrokinetic chromatog.)

IT 51-31-0, (R)-Isoproterenol 51-43-4, (-)-Epinephrine 51-55-8, (.+-.)-Atropine 56-29-1, (.+-.)-Hexobarbital 76-73-3, (.+-.)-Secobarbital 76-74-4, (.+-.)-Pentobarbital 77-21-4, (.+-.)-Glutethimide 81-81-2, (.+-.)-Warfarin 81-82-3, (.+-.)-Coumachlor 85-63-2, (-)-Laudanosine 87-00-3, (.+-.)-Homatropine 90-81-3, (.+-.)-Ephedrine 90-82-4, (+)-Pseudoephedrine 101-31-5, (-)-Atropine 115-38-8, (.+-.)-Mephobarbital 119-53-9, (.+-.)-Benzoin 125-84-8, (.+-.)-Aminoglutethimide 150-05-0, (+)-Epinephrine 299-42-3, (-)-Ephedrine 321-97-1, (-)-Pseudoephedrine 321-98-2, (+)-Ephedrine 329-65-7, (.+-.)-Epinephrine 485-33-6, (.+-.)-Laudanosoline 492-41-1, (-)-Norephedrine 525-66-6 529-81-7, (.+-.)-Troger's base 552-79-4, (-)-Methylephedrine 574-09-4, (.+-.)-Benzoin ethyl ether 602-09-5, (.+-.)-1,1'-Bi-2-naphthol 604-75-1, (.+-.)-Oxazepam 655-48-1, (.+-.)-Hydrobenzoin 846-49-1, (.+-.)-Lorazepam 846-50-4, (.+-.)-Temazepam 1201-56-5, (.+-.)-Methylephedrine 1699-51-0, (.+-.)-Laudanosine 2303-80-2, (-)-Mephobarbital 2325-10-2, (-)-Hydrobenzoin 2671-99-0, (+)-Mephobarbital 2688-77-9, (+)-Laudanosine 2784-27-2, (.+-.)-5-(4-Hydroxyphenyl)-5-phenylhydantoin 2964-04-7, (S)-Isoproterenol 3524-62-7, (.+-.)-Benzoin methyl ether 4125-58-0, (.+-.)-Pseudoephedrine 4199-09-1 4332-95-0 4332-97-2 4333-20-4, DL-PTH-valine 4333-22-6 4405-04-3 4488-22-6, (.+-.)-1,1'-Binaphthyl-2,2'-diamine 4747-99-3, (.+-.)-Norlaudanosoline

5051-22-9 5543-57-7, (-)-Warfarin 5543-58-8, (+)-Warfarin 5767-32-8, (-)-Pentobarbital 5789-24-2 5928-66-5, (-)-Benzoin 5928-67-6, (+)-Benzoin 6452-71-7, (.+-.)-Oxprenolol 6652-28-4 6740-88-1, (.+-.)-Ketamine 6843-49-8, (.+-.)-5-Methyl-5-phenylhydantoin 7245-04-7, (+)-Hexobarbital 7245-06-9, (-)-Hexobarbital 7683-59-2, Isoproterenol 13269-35-7, (+)-Atropine 13523-86-9, (.+-.)-Pindolol 13655-52-2, (.+-.)-Alprenolol 13669-70-0, (.+-.)-Nefopam 14645-24-0, (-)-Troger's base 14838-15-4, (.+-.)-Norephedrine 17575-58-5, (+)-Glutethimide 17575-59-6, (-)-Glutethimide 18531-94-7, (+)-1,1'-Bi-2-naphthol 18531-95-8, (-)-1,1'-Binaphthyl-2,2'-diamine 18531-99-2, (-)-1,1'-Bi-2-naphthol 18741-85-0, (+)-1,1'-Binaphthyl-2,2'-diamine 20224-45-7, (-)-Secobarbital 21045-50-1, (+)-Pentobarbital 21451-74-1, (+)-Troger's base 22328-94-5, (+)-Secobarbital 22972-96-9, (-)-Oxprenolol 23031-25-6, (.+-.)-Terbutaline 23846-71-1, (-)-Alprenolol 23846-72-2, (+)-Alprenolol 26328-11-0, (-)-Pindolol 27539-12-4, (+)-5-Methyl-5-phenylhydantoin 29122-68-7, (.+-.)-Atenolol 29583-07-1 29588-07-6 29588-08-7 29635-81-2, L-PTH-valine 29635-93-6 31364-86-0 31364-93-9 31576-00-8, (+)-Oxprenolol 33643-46-8, (-)-Ketamine 33643-49-1, (+)-Ketamine 35193-63-6, (.+-.)-1,1'-Binaphthyl-2,2'-diyl hydrogen phosphate 35193-64-7, (+)-1,1'-Binaphthyl-2,2'-diyl hydrogen phosphate 37394-31-3, (-)-Terbutaline 37517-30-9, (.+-.)-Acebutolol 37577-28-9, (+)-Norephedrine 39648-67-4, (-)-1,1'-Binaphthyl-2,2'-diyl hydrogen phosphate 40762-00-3, (+)-Oxazepam 42151-56-4, (+)-Methylephedrine 42399-41-7, (+)-Diltiazem 51017-31-3, (-)-Homatropine 51017-33-5, (+)-Homatropine 51169-17-6, (.+-.)-5-(4-Methylphenyl)-5-phenylhydantoin 51384-51-1, (.+-.)-Metoprolol 52340-78-0, (+)-Hydrobenzoin 52432-54-9, (-)-Oxazepam 52432-56-1, (+)-Temazepam 52432-57-2, (-)-Temazepam 53531-34-3 55511-44-9, (+)-Aminoglutethimide 56209-45-1, (.+-.)-Diltiazem 56710-93-1 56715-13-0, (+)-Atenolol 57073-15-1, (S)-Norlaudanosoline 57073-16-2, (R)-Norlaudanosoline 57288-03-6, (-)-Aminoglutethimide 57496-19-2, (R)-5-(4-Hydroxyphenyl)-5-phenylhydantoin 57496-20-5, (S)-5-(4-Hydroxyphenyl)-5-phenylhydantoin 60646-30-2 65487-67-4 66792-10-7 68374-35-6, (+)-Pindolol 70888-76-5, (S)-Coumachlor 75472-92-3, (-)-Diltiazem 77387-33-8 81024-42-2, (-)-Metoprolol 81024-43-3, (+)-Metoprolol 81626-21-3 82572-27-8, (S)-Benzoin methyl ether 82572-28-9, (R)-Benzoin methyl ether 90877-48-8, (+)-Terbutaline 91402-80-1, (R)-Lorazepam 91463-82-0, (-)-Nefopam 92419-08-4, D-PTH-valine 92419-09-5 93379-54-5, (-)-Atenolol 95271-89-9, (R)-Coumachlor 101693-73-6, (-)-5-Methyl-5-phenylhydantoin 110011-82-0, (+)-Nefopam 110032-65-0, (S)-Lorazepam 110115-88-3 110169-70-5 138258-02-3, (R)-5-(4-Methylphenyl)-5-phenylhydantoin 138258-03-4, (s)-5-(4-Methylphenyl)-5-phenylhydantoin 146925-16-8 146925-17-9 202819-56-5, (R)-Benzoin ethyl ether 202819-57-6, (S)-Benzoin ethyl ether 303157-71-3 303157-72-4 499215-26-8, (.+-.)-Chlorothalidone 499215-28-0, (R)-Chlorothalidone 499215-30-4, (S)-Chlorothalidone 499215-36-0 499215-38-2 499215-41-7 499215-46-2 499215-48-4 499215-51-9 499215-52-0 499215-55-3 499237-82-0
RL: ANT (Analyte); ANST (Analytical study)
(analyte; poly(sodium undecanoylleucylvalinate) as versatile chiral selector for micellar electrokinetic chromatog.)

IT **204689-88-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(in preparation of polysodium undecanoyl-leucylvalinate)

IT **204689-91-8P**, Poly(sodium N-Undecanoyl-L-leucylvalinate)
RL: ARU (Analytical role, unclassified); NUU (Other use, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(poly(sodium undecanoylleucylvalinate) as versatile chiral selector for micellar electrokinetic chromatog.)

IT 56710-94-2, L-PTH-norleucine
RL: ANT (Analyte); ANST (Analytical study)
(L-PTH-norleucine, analyte; poly(sodium undecanoylleucylvalinate) as versatile chiral selector for micellar electrokinetic chromatog.)

RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD

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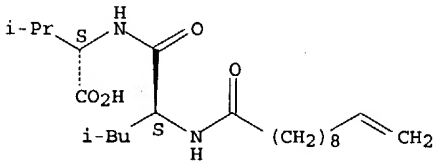
IT **204689-88-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(in preparation of polysodium undecanoyl-leucylvalinate)
RN 204689-88-3 HCAPLUS
CN L-Valine, N-(1-oxo-10-undecenyl)-L-leucyl-, monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **204689-88-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(in preparation of polysodium undecanoyl-leucylvalinate)
IT **204689-91-8P**, Poly(sodium N-Undecanoyl-L-leucylvalinate)
RL: ARU (Analytical role, unclassified); NUU (Other use, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(poly(sodium undecanoylleucylvalinate) as versatile chiral selector for micellar electrokinetic chromatog.)

L21 ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:947166 HCAPLUS
DN 138:189809
ED Entered STN: 15 Dec 2002
TI Pulsed field gradient NMR investigation of solubilization equilibria in amino acid and dipeptide terminated micellar and polymeric surfactant solutions
AU Hickok, Robin S.; Wedge, Seamus A.; Hansen, Alexandar L.; Morris, Kevin F.; Billiot, Fereshteh Haddadian; **Warner, Isiah M.**
CS Department of Chemistry, Carthage College, Kenosha, WI, 53140, USA
SO Magnetic Resonance in Chemistry (2002), 40(12), 755-761
CODEN: MRCHEG; ISSN: 0749-1581
PB John Wiley & Sons Ltd.
DT Journal
LA English
CC 46-3 (Surface Active Agents and Detergents)
AB Pulsed field gradient NMR spectroscopy was used to investigate the association of toluene, chlorobenzene and benzyl alc. with amino acid and dipeptide terminated polymerized surfactants (PS). The diffusion coefficient for each probe was measured in the presence and absence of the polymers and the mole fraction of bound probe mols., fb, was calculated For all solns. investigated, the probes associated more strongly with unpolymd. surfactant micelles than with corresponding PS. For example, the toluene fb values for association with sodium undecanoyl valinate micelles and the PS

poly(sodium undecanoyl valinate) were 0.88 and 0.15, resp. The relatively weak probe-polymer association was attributed to the polarity and fluidity of the polymers' hydrocarbon cores and to the fact that these PS have smaller aggregation nos. than the corresponding unpolymd. surfactant micelles.

ST amino acid dipeptide surfactant solubilization equil

IT Solubilization
Surfactants
(pulsed field gradient NMR investigation of solubilization equilibrium in amino acid and dipeptide terminated micellar and polymeric surfactant solns.)

IT 54301-26-7 83871-09-4 144597-01-3, L-Valine, N-(1-oxo-10-undecenyl)-, monosodium salt 145228-96-2 **220928-25-6 220928-26-7** **222971-26-8 222971-35-9** 499222-34-3 499222-35-4 499222-36-5
RL: PRP (Properties)
(pulsed field gradient NMR investigation of solubilization equilibrium in amino acid and dipeptide terminated micellar and polymeric surfactant solns.)

RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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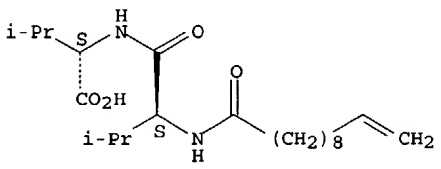
IT **220928-25-6**
RL: PRP (Properties)
(pulsed field gradient NMR investigation of solubilization equilibrium in amino acid and dipeptide terminated micellar and polymeric surfactant solns.)

RN 220928-25-6 HCAPLUS

CN L-Valine, N-(1-oxo-10-undecenyl)-L-valyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT **220928-25-6 220928-26-7 222971-26-8**
222971-35-9
RL: PRP (Properties)
(pulsed field gradient NMR investigation of solubilization equilibrium in amino acid and dipeptide terminated micellar and polymeric surfactant solns.)

L21 ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:164136 HCAPLUS
DN 136:340990
ED Entered STN: 07 Mar 2002
TI Comparison of the Aggregation Behavior of 15 Polymeric and Monomeric Dipeptide Surfactants in Aqueous Solution
AU Billiot, Fereshteh Haddadian; McCarroll, Matthew; **Billiot, Eugene J.**; Rugutt, Joseph K.; Morris, Kevin; **Warner, Isiah M.**
CS Department of Physical and Life Science, Texas A&M University-Corpus Christi, Corpus Christi, TX, 78412, USA
SO Langmuir (2002), 18(8), 2993-2997
CODEN: LANGD5; ISSN: 0743-7463
PB American Chemical Society
DT Journal
LA English
CC 34-3 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 22, 46
AB The aggregation nos. of several chiral dipeptide surfactants were estimated by using fluorescence steady-state quenching techniques. Polymerization of the surfactants with .gamma. radiation resulted in mol. micelles with a lower number of repeat units than the corresponding monomer aggregation nos. at the concentration of monomer used for polymerization The aggregation nos. of the monomers decreased with increasing size of the N-terminal R group of the dipeptide surfactants. The aggregation mechanism of the dipeptide surfactants was further studied using 1H NMR spectroscopy. The proton resonances due to NH and H.alpha. were measured above and below the critical micelle concentration of the surfactants. From the differences in proton chemical shifts of the monomeric dipeptide surfactants and aggregation nos., a model for packing of the monomeric polar head is proposed.
ST aggregation comparison dipeptide surfactant monomer polymer aq soln; micelle packing chiral dipeptide surfactant
IT Aggregation
Conformation
Critical micelle concentration
Micelles
Molecular association
Surfactants
(comparison of aggregation behaviors of dipeptide surfactant monomers and their photo-polymers in aqueous solns.)
IT Dipeptides
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(comparison of aggregation behaviors of dipeptide surfactant monomers and their photo-polymers in aqueous solns.)
IT Polymer chains
(packing; comparison of aggregation behaviors of dipeptide surfactant monomers and their photo-polymers in aqueous solns.)
IT Polymerization
(photopolymn.; comparison of aggregation behaviors of dipeptide surfactant monomers and their photo-polymers in aqueous solns.)
IT Molecular structure-property relationship
(relationship between aggregation behavior and the size of the N-terminus R group in the dipeptide surfactants)
IT **192448-34-3 204689-87-2 204689-88-3**
204689-89-4 221010-55-5 243843-95-0 243843-97-2
282529-76-4 364047-66-5 364047-68-7 364047-71-2 364047-74-5
364047-80-3 364047-83-6 364047-87-0
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(comparison of aggregation behaviors of dipeptide surfactant monomers and their photo-polymers in aqueous solns.)
IT 364047-67-6P 364047-70-1P 364047-72-3P 364047-76-7P 364047-77-8P
364047-78-9P 364047-79-0P 364047-81-4P 364047-82-5P 364047-84-7P
364047-85-8P 364047-86-9P 364047-88-1P
364047-89-2P 364047-90-5P
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP

(Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(comparison of aggregation behaviors of dipeptide surfactant monomers and their photo-polymers in aqueous solns.)

RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD

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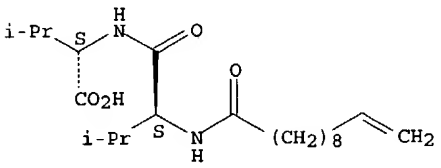
IT **192448-34-3**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(comparison of aggregation behaviors of dipeptide surfactant monomers and their photo-polymers in aqueous solns.)

RN 192448-34-3 HCAPLUS

CN L-Valine, N-(1-oxo-10-undecenyl)-L-valyl-, monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT **192448-34-3 204689-87-2 204689-88-3**
204689-89-4
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(comparison of aggregation behaviors of dipeptide surfactant monomers and their photo-polymers in aqueous solns.)

IT **364047-85-8P 364047-86-9P 364047-89-2P**
364047-90-5P
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(comparison of aggregation behaviors of dipeptide surfactant monomers and their photo-polymers in aqueous solns.)

L21 ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:154624 HCAPLUS

DN 137:118753

ED Entered STN: 28 Feb 2002

TI Depth of penetration of binaphthyl derivatives into the micellar core of

sodium undecenoyl leucyl-leucinate surfactants
AU Haddadian Billiot, Fereshteh; **Billiot, Eugene J.**; **Warner, Isiah M.**
CS Department of Physical and Life Science, Texas A&M University-Corpus Christi, Corpus Christi, TX, 78412, USA
SO Journal of Chromatography, A (2002), 950(1-2), 233-239
CODEN: JCRAEY; ISSN: 0021-9673
PB Elsevier Science B.V.
DT Journal
LA English
CC 80-4 (Organic Analytical Chemistry)
AB Two different diastereomeric forms of sodium N-undecanoyl leucyl-leucinate (SULL) (both L,L and L,D) were used to examine the role of depth of penetration of chiral analytes into the micellar core of polymeric and monomeric surfactants on enantioselectivity. Chiral separation of three binaphthyl derivs., i.e. (.+-.)-1,1'-bi-naphthyl-2,2'-diamine (BNA), (.+-.)-1,1'-bi-2-naphthol (BOH), and (.+-.)-1,1'-binaphthyl-2,2'-dihydrogen phosphate (BNP), were studied. Chromatog. results suggest that BNP interacts approx. the same with both the C- and N-terminal amino acid of poly SULL, while the preferential site of interaction of this analyte with the monomeric form of SULL (mono SULL) is at the C-terminal amino acid. This indicates that BNP enantiomers penetrate deeper into the micellar core of the poly SULL than that of the mono SULL. Varying the temperature resulted in a change in the depth of penetration of BNP into the micellar core of the poly SULL. However, the enantiomers of BNA and BOH always interact preferentially with the N-terminal amino acid of SULL surfactants (both polymer and monomer), independent of the temps. studied.
ST binaphthyl deriv electrokinetic chromatog sodium undecenoyl leucylleucinate surfactant
IT Micellar electrokinetic capillary chromatography
(depth of penetration of binaphthyl derivs. into the micellar core of sodium undecenoyl leucyl-leucinate surfactants)
IT Resolution (separation)
(enantiomeric; depth of penetration of binaphthyl derivs. into the micellar core of sodium undecenoyl leucyl-leucinate surfactants)
IT 602-09-5, (.+-.)-1,1'-Bi-2-naphthol 4488-22-6, (.+-.)-1,1'-Bi-naphthyl-2,2'-diamine 18531-94-7, (+)-1,1'-Bi-2-naphthol 18531-95-8, (-)-1,1'-Bi-naphthyl-2,2'-diamine 18531-99-2, (-)-1,1'-Bi-2-naphthol 18741-85-0, (+)-1,1'-Bi-naphthyl-2,2'-diamine 102928-39-2 119479-31-1 150408-24-5
RL: ANT (Analyte); ANST (Analytical study)
(depth of penetration of binaphthyl derivs. into the micellar core of sodium undecenoyl leucyl-leucinate surfactants)
IT **204689-89-4 204689-92-9 243843-89-2 243843-90-5**
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(depth of penetration of binaphthyl derivs. into the micellar core of sodium undecenoyl leucyl-leucinate surfactants)
RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Billiot, E; Anal Chem 1998, V70, P1375 HCAPLUS
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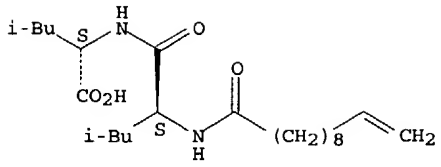
(16) Yarabe, H; J Chromatogr A 2000, V875, P179 HCAPLUS
IT **204689-89-4**
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(depth of penetration of binaphthyl derivs. into the micellar core of sodium undecenoyl leucyl-leucinate surfactants)
RN 204689-89-4 HCAPLUS
CN L-Leucine, N-(1-oxo-10-undecenyl)-L-leucyl-, monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



● Na

IT **204689-89-4 204689-92-9 243843-89-2**
243843-90-5
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(depth of penetration of binaphthyl derivs. into the micellar core of sodium undecenoyl leucyl-leucinate surfactants)

L21 ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:520283 HCAPLUS
DN 135:273204
ED Entered STN: 19 Jul 2001
TI Comparison of monomeric and polymeric amino acid based surfactants for chiral separations
AU Billiot, Fereshteh H.; **Billiot, Eugene J.**; **Warner, Isiah M.**
CS Department of Physical and Life Sciences, Texas A&M University-Corpus Christi, Corpus Christi, TX, 78412, USA
SO Journal of Chromatography, A (2001), 922(1-2), 329-338
CODEN: JCRAEY; ISSN: 0021-9673
PB Elsevier Science B.V.
DT Journal
LA English
CC 34-3 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 22, 46, 80
AB To better understand chiral recognition with polymeric amino acid based surfactants, the chromatog. performance of 18 monomeric and polymeric surfactants were compared for chiral analytes with various charge states and hydrophobicities. In this study, four amino acids (glycine, L-alanine, L-valine, and L-leucine) were chosen, and all possible combinations of the chiral single amino acid and dipeptide surfactants were synthesized. The results indicate that polymeric surfactants usually provide better chiral resolution for enantiomers of lorazepam, temazepam, 1,1'-bi-2-naphthol, and propranolol as compared to monomeric surfactants. In contrast, monomers perform better for chiral recognition of the 1,1'-bi-2-naphthyl-2,2'-diyl hydrogenphosphate enantiomers.
ST amino acid surfactants chiral recognition sepn
IT Chiral recognition
Resolution (separation)
Surfactants
(preparation and comparison of monomeric and polymeric amino acid based surfactants for chiral sepns.)
IT Amino acids, preparation
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and comparison of monomeric and polymeric amino acid based surfactants for chiral sepns.)
IT Dipeptides
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and comparison of monomeric and polymeric amino acid based surfactants for chiral sepns.)
IT 144597-01-3P 175357-27-4P 175357-31-0P **192448-34-3P**
204689-87-2P 204689-88-3P 204689-89-4P
221010-55-5P 243843-95-0P 243843-97-2P 282529-76-4P 364047-66-5P
364047-68-7P 364047-71-2P 364047-74-5P 364047-80-3P 364047-83-6P
364047-87-0P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and comparison of monomeric and polymeric amino acid based surfactants for chiral sepns.)
IT 364047-67-6P 364047-70-1P 364047-72-3P 364047-76-7P 364047-77-8P
364047-78-9P 364047-79-0P 364047-81-4P 364047-82-5P 364047-84-7P
364047-85-8P 364047-86-9P 364047-88-1P
364047-89-2P 364047-90-5P 364047-91-6P 364047-92-7P
364047-93-8P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and comparison of monomeric and polymeric amino acid based surfactants for chiral sepns.)

IT 525-66-6 602-09-5, [1,1'-Binaphthalene]-2,2'-diol 846-49-1 846-50-4 35193-63-6
RL: PRP (Properties)
(preparation and comparison of monomeric and polymeric amino acid based surfactants for chiral sepns. of)

RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Agnew-Heard, K; Anal Chem 1997, V69, P958 HCAPLUS
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(4) Billiot, E; Anal Chem 1998, V70, P1375 HCAPLUS
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(6) Billiot, E; Anal Chem 1999, V71, P4041
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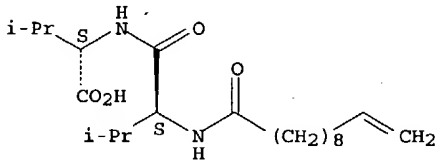
IT **192448-34-3P**
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and comparison of monomeric and polymeric amino acid based surfactants for chiral sepns.)

RN 192448-34-3 HCAPLUS

CN L-Valine, N-(1-oxo-10-undecenyl)-L-valyl-, monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



● Na

IT **192448-34-3P 204689-87-2P 204689-88-3P 204689-89-4P**
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and comparison of monomeric and polymeric amino acid based surfactants for chiral sepns.)

IT **364047-85-8P 364047-86-9P 364047-89-2P 364047-90-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and comparison of monomeric and polymeric amino acid based surfactants for chiral sepns.)

L21 ANSWER 9 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:358839 HCAPLUS

DN 133:106601

ED Entered STN: 31 May 2000

TI Chiral separation with dipeptide-terminated polymeric surfactants: the

effect of an extra heteroatom on the polar head group
AU Haynes, Judson L., III; **Billiot, Eugene J.**; Yarabe, Hyacinthe H.; **Warner, Isiah M.**; **Shamsi, Shahab A.**
CS Department of Chemistry, Louisiana State University, Baton Rouge, LA, 70803, USA
SO Electrophoresis (2000), 21(8), 1597-1605
CODEN: ELCTDN; ISSN: 0173-0835
PB Wiley-VCH Verlag GmbH
DT Journal
LA English
CC 46-3 (Surface Active Agents and Detergents)
Section cross-reference(s): 38, 63, 80
AB Chiral recognition of two binaphthyl derivs. and three benzodiazepines was studied using polymeric surfactants in electrokinetic chromatog. The four specific dipeptide terminated (multichiral) micelle polymers were prepared These include poly(sodium-N-undecanoyl-L-alanyl leucinate) (poly L-SUAL), poly(sodium-N-undecanoyl-L-valyl leucinate) (poly L-SUVL), poly(sodium-N-undecanoyl-L-seryl leucinate) (poly L-SUSL), and poly(sodium-N-undecanoyl-L-threonyl leucinate) (poly L-SUTL). The physicochem. properties (critical micelle concentration and sp. rotation) of the polymers were studied and the mol. weight of dipeptide-terminated micelle polymers were determined using anal. ultracentrifugation. The dipeptide-terminated micelle polymers were designed to study the effect of the extra heteroatom at the polar head group of the micelle polymer (i.e., poly L-SUSL compared to poly L-SUAL and poly L-SUTL compared to poly L-SUVL) on the enantiomeric separation of binaphthyl derivs. and benzodiazepines. The synergistic effect of three chiral centers in (poly L-SUTL) provided improved resolution over that of two chiral centered dipeptide-terminated micelle polymer in the case of (.+-.)-temazepam, (.+-.)-oxazepam, (.+-.)-binaphthol, and (.+-.)-binaphthol phosphate. The chiral recognition mechanisms in these cases were addnl. controlled by the presence of the extra heteroatom located on the polar head group of the micelle polymers.
ST peptide terminated micelle polymer prepn electrokinetic chromatog use; sodium undecanoyl dipeptide surfactant polymer chiral recognition; benzodiazepine chiral sepn dipeptide terminated micelle polymer; binaphthol chiral sepn electrokinetic chromatog peptide surfactant polymer
IT Surfactants
(anionic, polymeric; preparation and critical micelle concentration and sp. rotation of dipeptide-terminated polymer surfactants and performance in chiral sepns.)
IT Antidepressants
Chiral recognition
Chirality
Critical micelle concentration
Enantiomers
(preparation and critical micelle concentration and sp. rotation of dipeptide-terminated polymer surfactants and performance in chiral sepns.)
IT 602-09-5, 1,1'-Binaphthyl-2,2'-diol 604-75-1, Oxazepam 846-49-1, Lorazepam 846-50-4, Temazepam 35193-63-6, 1,1'-Binaphthyl-2,2'-diyl hydrogen phosphate
RL: ANT (Analyte); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process)
(preparation and critical micelle concentration and sp. rotation of dipeptide-terminated polymer surfactants and performance in chiral sepns.)
IT **204689-90-7P** 282529-77-5P 282529-79-7P 282529-81-1P
RL: ARG (Analytical reagent use); PNU (Preparation, unclassified); PRP (Properties); ANST (Analytical study); PREP (Preparation); USES (Uses)
(preparation and critical micelle concentration and sp. rotation of dipeptide-terminated polymer surfactants and performance in chiral sepns.)
RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Agnew-Heard, K; Anal Chem 1997, V69, P958 HCAPLUS
(2) Dobashi, A; Anal Chem 1995, V67, P3011 HCAPLUS
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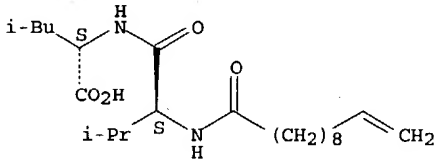
IT **204689-90-7P**
RL: ARG (Analytical reagent use); PNU (Preparation, unclassified); PRP (Properties); ANST (Analytical study); PREP (Preparation); USES (Uses)
(preparation and critical micelle concentration and sp. rotation of dipeptide-terminated polymer surfactants and performance in chiral sepns.)

RN 204689-90-7 HCAPLUS
CN L-Leucine, N-(1-oxo-10-undecenyl)-L-valyl-, monosodium salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 204689-87-2
CMF C22 H40 N2 O4 . Na

Absolute stereochemistry.



IT **204689-90-7P**
RL: ARG (Analytical reagent use); PNU (Preparation, unclassified); PRP (Properties); ANST (Analytical study); PREP (Preparation); USES (Uses)
(preparation and critical micelle concentration and sp. rotation of dipeptide-terminated polymer surfactants and performance in chiral sepns.)

L21 ANSWER 10 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:83984 HCAPLUS
DN 132:293993
ED Entered STN: 04 Feb 2000
TI NMR study of the interaction of monomeric and polymeric chiral surfactants with (R)- and (S)-1,1'-binaphthyl-2,2'-diyl hydrogen phosphate
AU Rugutt, Joseph K.; **Billiot, Eugene; Warner, Isiah M.**
CS Department of Chemistry, Massachusetts College of Liberal Arts, North Adams, MA, 01247-4100, USA
SO Langmuir (2000), 16(7), 3022-3029
CODEN: LANGD5; ISSN: 0743-7463
PB American Chemical Society
DT Journal
LA English
CC 34-3 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 22, 46
AB Chiral discrimination of enantiomers of 1,1'-binaphthyl-2,2'-diyl hydrogen phosphate (BNDHP) by monomeric chiral surfactants (CS), sodium N-undecylenyl-L-valine-L-leucine and sodium N-undecylenyl-L-leucine-L-valine, and related polymers is investigated by high-field one (1D)- and two-dimensional (2D) NMR spectroscopy. A general property of the high-resolution 1H NMR spectra of monomeric CS in 90% H2O/10% D2O is the appearance of downfield well-resolved chemical shift signals corresponding to the alpha (.alpha.H) protons of valine (Val.alpha.H) and leucine (Leu.alpha.H) amino acid residues. The remaining skeletal protons resonate in the region 0.5-2.5 ppm, giving rise to an envelope of poorly resolved chemical shifts. The 1H NMR signals of (R)- and (S)-BNDHP were

enantiomerically separated into six sets of peaks in the presence of CS. The conformational anal. by means of nuclear Overhauser effect spectroscopy expts. indicates that the CS mols. adopt folded conformations in aqueous solution The multiple interactions of (S)-BNDHP and CS obtained from intermol. rotating frame Overhauser effect NMR spectroscopy is direct evidence on the mechanism of chiral recognition in aqueous media.

ST chiral recognition binaphthyldiyl hydrogen phosphate surfactant NMR; peptide polymeric chiral surfactant interaction BNDHP; surfactant chiral leucylvaline valylleucine conformation NMR

IT Chiral recognition
(NMR study of chiral recognition between binaphthyldiyl hydrogen phosphate and chiral surfactants)

IT Peptides, preparation
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(NMR study of chiral recognition between binaphthyldiyl hydrogen phosphate and chiral surfactants)

IT Surfactants
(chiral; NMR study of chiral recognition between binaphthyldiyl hydrogen phosphate and chiral surfactants)

IT Conformation
(folded; NMR study of chiral recognition between binaphthyldiyl hydrogen phosphate and chiral surfactants)

IT Surfactants
(polymerizable, chiral, peptide; NMR study of chiral recognition between binaphthyldiyl hydrogen phosphate and chiral surfactants)

IT NMR spectroscopy
(two-dimensional; NMR study of chiral recognition between binaphthyldiyl hydrogen phosphate and chiral surfactants)

IT 35193-64-7, (S)-1,1'-Binaphthyl-2,2'-diyl hydrogen phosphate 39648-67-4, Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-, 4-oxide, (11bR)-
RL: PRP (Properties)
(NMR study of chiral recognition between binaphthyldiyl hydrogen phosphate and chiral surfactants)

IT **204689-87-2P 204689-88-3P 204689-90-7P 204689-91-8P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(NMR study of chiral recognition between binaphthyldiyl hydrogen phosphate and chiral surfactants)

RE.CNT 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD

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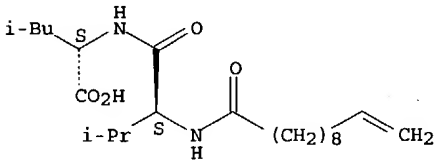
IT **204689-87-2P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(NMR study of chiral recognition between binaphthyldiyl hydrogen phosphate and chiral surfactants)

RN 204689-87-2 HCAPLUS

CN L-Leucine, N-(1-oxo-10-undecenyl)-L-valyl-, monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **204689-87-2P 204689-88-3P 204689-90-7P**
204689-91-8P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(NMR study of chiral recognition between binaphthyldiyl hydrogen phosphate and chiral surfactants)

L21 ANSWER 11 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:641302 HCAPLUS
DN 131:345909
ED Entered STN: 08 Oct 1999
TI Chiral separations using polymeric dipeptide surfactants: effect of number of chiral centers and steric factors
AU Haddadian, F.; **Billiot, E. J.**; Shamsi, S. A.; **Warner, I. M.**
CS Department of Chemistry, Louisiana State University, Baton Rouge, LA, USA
SO Journal of Chromatography, A (1999), 858(2), 219-227
CODEN: JCRAEY; ISSN: 0021-9673
PB Elsevier Science B.V.
DT Journal
LA English
CC 80-4 (Organic Analytical Chemistry)
Section cross-reference(s): 46, 64
AB Two polymeric dipeptide chiral surfactants (PDCSs), poly sodium N-undecanoyl isoleucyl-valinate (SUILV) with three chiral centers and poly sodium N-undecanoyl leucyl-valinate (SULV) with two chiral centers, were evaluated and compared as chiral pseudo-stationary phases in electrokinetic capillary chromatog. The performance of these surfactants, in terms of enantioselectivity was examined using anionic, cationic and neutral analytes. Analyses of the data suggest that the enantiomeric resolns. of the analytes with these two PDCSs are dependent upon steric factors rather than number of stereogenic centers.
ST chiral sepn polymeric dipeptide surfactant pseudo stationary phase; electrokinetic capillary chromatog polymeric dipeptide surfactant pseudo phase; pharmaceutical chiral sepn electrokinetic chromatog polymeric dipeptide surfactant
IT Pharmaceutical analysis
(chiral sepns. by electrokinetic capillary chromatog. using polymeric dipeptide surfactants)
IT Resolution (separation)
(chromatog.; chiral sepns. by electrokinetic capillary chromatog. using polymeric dipeptide surfactants)
IT Chromatography
(electrokinetic, capillary; chiral sepns. by electrokinetic capillary chromatog. using polymeric dipeptide surfactants)

IT Adrenoceptor antagonists
(.beta.-; chiral sepns. by electrokinetic capillary chromatog. using polymeric dipeptide surfactants)
IT 77-21-4, (.+-.)-Glutethimide 125-84-8, (.+-.)-Aminoglutethimide 525-66-6 602-09-5, [1,1'-Binaphthalene]-2,2'-diol 604-75-1, (.+-.)-Oxazepam 846-49-1, (.+-.)-Lorazepam 846-50-4, (.+-.)-Temazepam 4199-09-1, (-)-Propranolol 4488-22-6, [1,1'-Binaphthalene]-2,2'-diamine 5051-22-9, (+)-Propranolol 6452-71-7, (.+-.)-Oxprenolol 13655-52-2, (.+-.)-Alprenolol 17575-58-5 17575-59-6, (-)-Glutethimide 18531-94-7, (+)-1,1'-Bi-2-naphthol 18531-95-8 18531-99-2, (-)-1,1'-Bi-2-naphthol 18741-85-0 22972-96-9, (-)-Oxprenolol 23846-71-1, (-)-Alprenolol 23846-72-2, (+)-Alprenolol 31576-00-8, (+)-Oxprenolol 35193-63-6 35193-64-7 39648-67-4 40762-00-3, (+)-Oxazepam 52432-54-9, (-)-Oxazepam 52432-56-1, (+)-Temazepam 52432-57-2, (-)-Temazepam 53531-34-3, (-)-2,2,2-Trifluoro-1-(9-anthryl)ethanol 55511-44-9, (+)-Aminoglutethimide 57288-03-6, (-)-Aminoglutethimide 60646-30-2, (+)-2,2,2-Trifluoro-1-(9-anthryl)ethanol 65487-67-4, (.+-.)-2,2,2-Trifluoro-1-(9-anthryl)ethanol 91402-80-1, (R)-Lorazepam 110032-65-0, (S)-Lorazepam
RL: ANT (Analyte); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process)
(chiral sepns. by electrokinetic capillary chromatog. using polymeric dipeptide surfactants)
IT **204689-91-8P** 250232-90-7P
RL: ARU (Analytical role, unclassified); NUU (Other use, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(chiral sepns. by electrokinetic capillary chromatog. using polymeric dipeptide surfactants)
IT **222971-33-7** 250232-91-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(radiochem. polymerization of)
RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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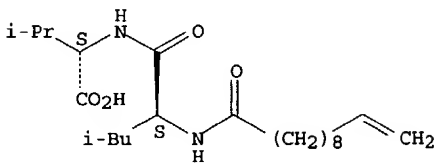
IT **204689-91-8P**
RL: ARU (Analytical role, unclassified); NUU (Other use, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(chiral sepns. by electrokinetic capillary chromatog. using polymeric dipeptide surfactants)
RN 204689-91-8 HCAPLUS
CN L-Valine, N-(1-oxo-10-undecenyl)-L-leucyl-, monosodium salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 204689-88-3

CMF C22 H40 N2 O4 . Na

Absolute stereochemistry.



● Na

IT **204689-91-8P**
RL: ARU (Analytical role, unclassified); NUU (Other use, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(chiral sepns. by electrokinetic capillary chromatog. using polymeric dipeptide surfactants)
IT **222971-33-7**
RL: RCT (Reactant); RACT (Reactant or reagent)
(radiochem. polymerization of)

L21 ANSWER 12 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:509605 HCAPLUS
DN 131:237284
ED Entered STN: 17 Aug 1999
TI Evaluating chiral separation interactions by use of diastereomeric polymeric dipeptide surfactants
AU **Billiot, Eugene; Thibodeaux, Stefan; Shamsi, Shahab; Warner, Isiah M.**
CS Department of Chemistry, Louisiana State University, Baton Rouge, LA, 70803, USA
SO Analytical Chemistry (1999), 71(18), 4044-4049
CODEN: ANCHAM; ISSN: 0003-2700
PB American Chemical Society
DT Journal
LA English
CC 80-4 (Organic Analytical Chemistry)
Section cross-reference(s): 46, 64
AB Poly sodium N-undecyl leucine-leucine (poly SULL) was used as a diagnostic tool to study chiral mol. interactions via electrokinetic chromatog. (EKC). Poly SULL has two chiral centers which are defined by two asym. carbons. Each chiral center of poly SULL can have two possible configurations (D or L). Consequently, four different optical configurations are possible within the surfactant mol. (L-L, D-D, L-D, and D-L). Five chiral analytes of various charge states and hydrophobicities were used to study the role of electrostatic interactions and hydrophobicity on chiral recognition with polymeric dipeptide surfactants. These studies lead to a proposed hypothesis for interaction of the analytes with dipeptide surfactants. The hypothesis was tested and the contribution of the double chiral centers to this interaction was evaluated using two dipeptide surfactants in which one chiral amino acid is replaced by an achiral amino acid glycine, i.e., poly sodium N-undecyl L-leucine-glycine (poly L-SULG) and poly sodium N-undecyl L-glycine-leucine (poly L-SUGL). The results reported here provide new insights into the mechanism for chiral recognition of select chiral analytes using polymeric chiral surfactants.
ST electrokinetic chromatog chiral sepn diastereomeric polymeric dipeptide surfactant; beta blocker chiral sepn electrokinetic chromatog polymeric dipeptide surfactant
IT Surfactants
(biosurfactants; chiral separation by interactions by use of diastereomeric polymeric dipeptide surfactants)
IT Micellar electrokinetic chromatography
(chiral separation by interactions by use of diastereomeric polymeric dipeptide surfactants)
IT Resolution (separation)
(chromatog.; chiral separation by micellar electrokinetic chromatog. using diastereomeric polymeric dipeptide surfactants)
IT Adrenoceptor antagonists
(.beta.-, alprenolol and propranolol; chiral separation by micellar

electrokinetic chromatog. using diastereomeric polymeric dipeptide surfactants)

IT 525-66-6 602-09-5, [1,1'-Binaphthalene]-2,2'-diol 4199-09-1, (-)-Propranolol 4488-22-6, [1,1'-Binaphthalene]-2,2'-diamine 5051-22-9, (+)-Propranolol 13655-52-2, (.+-.)-Alprenolol 18531-94-7, (+)-1,1'-Bi-2-naphthol 18531-95-8 18531-99-2, (-)-1,1'-Bi-2-naphthol 18741-85-0 23846-71-1, (-)-Alprenolol 23846-72-2, (+)-Alprenolol 35193-63-6 35193-64-7 39648-67-4
RL: ANT (Analyte); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process)
(chiral separation by micellar electrokinetic chromatog. using diastereomeric polymeric dipeptide surfactants)

IT **204689-92-9 243843-88-1 243843-90-5 243843-92-7** 243843-96-1 243843-98-3
RL: ARU (Analytical role, unclassified); NUU (Other use, unclassified); PRP (Properties); ANST (Analytical study); USES (Uses)
(chiral separation by micellar electrokinetic chromatog. using diastereomeric polymeric dipeptide surfactants)

IT 175357-43-4 243843-94-9
RL: ARU (Analytical role, unclassified); NUU (Other use, unclassified); PRP (Properties); ANST (Analytical study); USES (Uses)
(chiral separation by micellar electrokinetic chromatog. using surfactant of)

RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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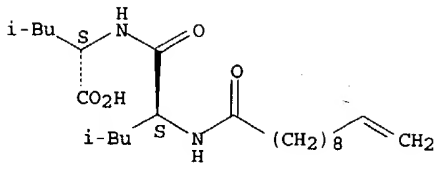
IT **204689-92-9**
RL: ARU (Analytical role, unclassified); NUU (Other use, unclassified); PRP (Properties); ANST (Analytical study); USES (Uses)
(chiral separation by micellar electrokinetic chromatog. using diastereomeric polymeric dipeptide surfactants)

RN 204689-92-9 HCAPLUS
CN L-Leucine, N-(1-oxo-10-undecenyl)-L-leucyl-, monosodium salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 204689-89-4
CMF C23 H42 N2 O4 . Na

Absolute stereochemistry. Rotation (-).



● Na

IT **204689-92-9 243843-88-1 243843-90-5**
243843-92-7
RL: ARU (Analytical role, unclassified); NUU (Other use, unclassified); PRP (Properties); ANST (Analytical study); USES (Uses)
(chiral separation by micellar electrokinetic chromatog. using diastereomeric polymeric dipeptide surfactants)

L21 ANSWER 13 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:126125 HCAPLUS
DN 130:283697
ED Entered STN: 26 Feb 1999
TI Amino Acid Order in Polymeric Dipeptide Surfactants: Effect on Physical Properties and Enantioselectivity
AU **Billiot, Eugene**; Agbaria, Rezik A.; **Thibodeaux, Stefan**; **Shamsi, Shahab**; **Warner, Isiah M.**
CS Department of Chemistry, Louisiana State University, Baton Rouge, LA, 70803, USA
SO Analytical Chemistry (1999), 71(7), 1252-1256
CODEN: ANCHAM; ISSN: 0003-2700
PB American Chemical Society
DT Journal
LA English
CC 46-1 (Surface Active Agents and Detergents)
Section cross-reference(s): 34, 80
AB The effect of amino acid order on chiral selectivity in polymeric dipeptide surfactants, as well as the phys. properties of the surfactants, is investigated. An understanding of enantioselectivity of such dipeptide surfactants is crucial to the design of more efficient polymeric surfactants and has implications in other areas of research such as enantioselective interactions of amino acid based compds. (i.e., enzymes, Hb, antibodies, etc.). It should be noted that such polymeric surfactants are not easily crystallized Therefore, in a manner similar to the study of proteins, fluorescence spectroscopy is a powerful tool used to study the structure-function relationship of these polymeric surfactants. The microenvironments inside the core of 18 polymeric surfactants were characterized using the environmentally sensitive probes pyrene and 6-propionyl-2-(dimethylamino)naphthalene (Prodan). The surfactants examined include all possible dipeptide combinations of the L-form of alanine, valine, and leucine and the achiral amino acid glycine (except glycine-glycine) as well as the single amino acid surfactants of alanine, valine, and leucine. The results of the fluorescent probe studies led to a proposed structure of the polymeric dipeptide surfactants in solution The implications of the proposed structure for chiral selectivity were tested with two model atropisomers, (.+-.)1,1'-bi-2-naphthol and (.+-.)1,1'-bi-2-naphthyl-2,2'-diyl hydrogen phosphate, using capillary electrokinetic chromatog.
ST polymer dipeptide surfactant amino acid order enantioselectivity phys property
IT Capillary electrophoresis
(amino acid order in polymeric dipeptide surfactants in relation to phys. properties and enantioselectivity)
IT Surfactants
(polymeric; amino acid order in polymeric dipeptide surfactants in relation to phys. properties and enantioselectivity)
IT Chirality
(resolution; amino acid order in polymeric dipeptide surfactants in relation to phys. properties and enantioselectivity)
IT 222971-05-3 222971-06-4 222971-07-5 222971-09-7 222971-12-2
222971-14-4 222971-16-6 222971-17-7 222971-19-9 222971-21-3
222971-23-5 222971-25-7 **222971-26-8 222971-28-0**
222971-30-4 222971-32-6 **222971-34-8 222971-35-9**
RL: PEP (Physical, engineering or chemical process); PRP (Properties);

PROC (Process)
(amino acid order in polymeric dipeptide surfactants in relation to phys. properties and enantioselectivity)
IT 602-09-5, 1,1'-Bi-2-naphthol 222971-36-0
RL: PRP (Properties)
(amino acid order in polymeric dipeptide surfactants in relation to phys. properties and enantioselectivity)
RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Agnew-Heard, K; Anal Chem 1997, V69, P958 HCAPLUS
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(5) Nakajima, A; Bull Chem Soc Jpn 1971, V44, P3272 HCAPLUS
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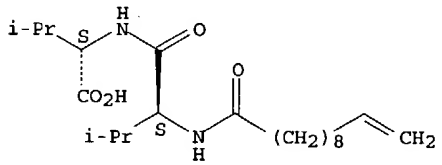
(9) Wang, J; J Chromatogr A 1995, V711, P297 HCAPLUS
(10) Weber, G; J Biochemistry 1979, V18, P3075 HCAPLUS
(11) Yarabe, H; manuscript in preparation
IT **222971-26-8**
RL: PEP (Physical, engineering or chemical process); PRP (Properties);
PROC (Process)
(amino acid order in polymeric dipeptide surfactants in relation to phys. properties and enantioselectivity)
RN 222971-26-8 HCAPLUS
CN L-Valine, N-(1-oxo-10-undecenyl)-L-valyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 220928-25-6
CMF C21 H38 N2 O4

Absolute stereochemistry. Rotation (-).



IT **222971-26-8 222971-28-0 222971-34-8**
222971-35-9
RL: PEP (Physical, engineering or chemical process); PRP (Properties);
PROC (Process)
(amino acid order in polymeric dipeptide surfactants in relation to phys. properties and enantioselectivity)

L21 ANSWER 14 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:71508 HCAPLUS
DN 130:209966
ED Entered STN: 03 Feb 1999
TI Synthesis of polymerized N-undecylenyl-L-amino acid and N-undecylenyl-L-peptide derivatives
AU Macossay, Javier; **Shamsi, Shabab A.; Warner, Isiah M.**
CS Chemistry Department, Louisiana State University, Baton Rouge, LA, 70803, USA
SO Tetrahedron Letters (1999), 40(4), 577-580
CODEN: TELEAY; ISSN: 0040-4039
PB Elsevier Science Ltd.
DT Journal
LA English
CC 34-3 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 35
AB Micelle-forming polymerized N-Undecylenyl-L-amino acid and N-Undecylenyl-L-peptide derivs. H2C:CH(CH2)8CO-X-OH (X = Ala, Val, Leu, Ile, Ala-Ala, Val-Val, Leu-Leu) have been obtained. These compds. are effective as pseudostationary phases in electrokinetic capillary electrophoresis for resolution of racemic binaphthyl derivs. Synthetic procedures are described in detail, as well as preliminary anal. data comparing amino acid derivs., and amino acid derivs. with peptide derivs.
ST undecenoylamino acid polymer prepn pseudostationary phase electrokinetic

capillary electrophoresis; racemate resoln undecenoylpeptide polymer prepn electrokinetic capillary electrophoresis

IT Capillary electrophoresis
(electrokinetic; preparation of polymerized N-undecenoylamino acids and -peptides as pseudostationary phases in electrokinetic capillary electrophoresis for racemate resolution)

IT Resolution (separation)
(preparation of polymerized N-undecenoylamino acids and -peptides as pseudostationary phases in electrokinetic capillary electrophoresis for racemate resolution)

IT 145228-96-2P 175357-40-1P 175357-43-4P 175357-44-5P
192448-35-4P 204689-92-9P 221010-56-6P
RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of polymerized N-undecenoylamino acids and -peptides as pseudostationary phases in electrokinetic capillary electrophoresis for racemate resolution)

IT 602-09-5P, (.+-.)-1,1'-Bi-2-naphthol 4488-22-6P, (.+-.)-1,1'-Binaphthyl-2,2'-diamine 18531-94-7P, (R)-1,1'-Bi-2-naphthol 18531-95-8P 18531-99-2P, (S)-1,1'-Bi-2-naphthol 18741-85-0P 35193-63-6P, (.+-.)-1,1'-Binaphthyl-2,2'-diyl hydrogen phosphate 35193-64-7P, (S)-1,1'-Binaphthyl-2,2'-diyl hydrogen phosphate 39648-67-4P, (R)-1,1'-Binaphthyl-2,2'-diyl hydrogen phosphate
RL: PUR (Purification or recovery); PREP (Preparation)
(preparation of polymerized N-undecenoylamino acids and -peptides as pseudostationary phases in electrokinetic capillary electrophoresis for racemate resolution)

IT 56-41-7, L-Alanine, reactions 61-90-5, L-Leucine, reactions 72-18-4, L-Valine, reactions 73-32-5, L-Isoleucine, reactions 112-38-9, 10-Undecenoic acid 1948-31-8, L-Alanyl-L-alanine 3303-31-9, L-Leucyl-L-leucine 3918-94-3, L-Valyl-L-valine
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of polymerized N-undecenoylamino acids and -peptides as pseudostationary phases in electrokinetic capillary electrophoresis for racemate resolution)

IT 54301-31-4P 54350-45-7P 110661-49-9P 175357-19-4P 175357-20-7P 220928-24-5P **220928-25-6P 220928-26-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of polymerized N-undecenoylamino acids and -peptides as pseudostationary phases in electrokinetic capillary electrophoresis for racemate resolution)

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Billiot, E; Anal Chem 1998, V70, P1375 HCAPLUS
(2) Desiderio, C; J Chromatogr A 1995, V716, P183 HCAPLUS
(3) Dobashi, A; Anal Chem 1989, V61, P1984 HCAPLUS
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(8) Kuhn, R; J Chromatogr A 1994, V666, P367 HCAPLUS
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(11) Mazzeo, J; J Chromatogr A 1994, V680, P125 HCAPLUS
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(14) Wang, J; Anal Chem 1994, V66, P3773 HCAPLUS
(15) Ward, T; Anal Chem 1994, V66, P633A

IT **192448-35-4P**
RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of polymerized N-undecenoylamino acids and -peptides as pseudostationary phases in electrokinetic capillary electrophoresis for racemate resolution)

RN 192448-35-4 HCAPLUS

CN L-Valine, N-(1-oxo-10-undecenyl)-L-valyl-, monosodium salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 192448-34-3
CMF C21 H38 N2 O4 . Na

Absolute stereochemistry. Rotation (-).

(12) Ishihama, Y; J Liq Chromatogr 1993, V16, P933 HCAPLUS
(13) Mazzeo, J; Anal Chem 1995, V67, P2966 HCAPLUS
(14) Mazzeo, J; J Chromatogr A 1994, V680, P125 HCAPLUS
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(17) Mechref, Y; Electrophoresis 1997, V18, P912 HCAPLUS
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(20) Nishi, H; J Microcolumn Sep 1989, V1, P234 HCAPLUS
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(33) Wang, J; Anal Chem 1994, V66, P3773 HCAPLUS
(34) Wang, J; J Chromatogr A 1995, V711, P297 HCAPLUS

IT **192448-35-4P**
RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(effect of amino acid order on chiral sepns. using dipeptide polymerized surfactants)

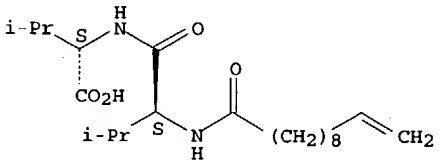
RN 192448-35-4 HCAPLUS

CN L-Valine, N-(1-oxo-10-undecenyl)-L-valyl-, monosodium salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 192448-34-3
CMF C21 H38 N2 O4 . Na

Absolute stereochemistry. Rotation (-).



● Na

IT **192448-35-4P 204689-90-7P 204689-91-8P 204689-92-9P**
RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(effect of amino acid order on chiral sepns. using dipeptide polymerized surfactants)

IT **192448-34-3P 204689-87-2P 204689-88-3P 204689-89-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(effect of amino acid order on chiral sepns. using dipeptide polymerized surfactants)

L20 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1997:410656 HCAPLUS
DN 127:116852
ED Entered STN: 03 Jul 1997
TI Improved Chiral Separations Using a Polymerized Dipeptide Anionic Chiral Surfactant in Electrokinetic Chromatography: Separations of Basic, Acidic, and Neutral Racemates
AU **Shamsi, Shahab A.**; Macossay, Javier; **Warner, I. M.**
CS Department of Chemistry, Louisiana State University, Baton Rouge, LA, 70803, USA
SO Analytical Chemistry (**1997**), 69(15), 2980-2987

Searched by Noble Jarrell

CODEN: ANCHAM; ISSN: 0003-2700
PB American Chemical Society
DT Journal
LA English
CC 80-4 (Organic Analytical Chemistry)
Section cross-reference(s): 64

AB Two polymeric chiral anionic surfactants [poly(sodium N-undecylenoyl-L-valine) (poly-L-SUV) and poly(sodium N-undecylenoyl-L-valine-valine) (poly-L-SUVV)] are compared as pseudostationary phases for chiral sepns. of basic, acidic, and neutral enantiomers. Parameters such as pH, concentration and type of background electrolyte, concentration of polymerized chiral surfactants, and injection size were studied to study the migration behavior and optimize the chiral resolution of several racemic analytes. At equivalent monomer concns., the migration factors for cationic enantiomers were larger with poly-L-SUV than with poly-L-SUVV. But the reverse was true for anionic enantiomers. However, in both cases, chiral recognition was significantly enhanced with poly-L-SUVV as compared to that with poly-L-SUV. It is interesting to note that the separation selectivity and resolution of a neutral racemate were slightly better with the latter, but only at the expense of longer anal. time and lower efficiencies.

ST polymd dipeptide anionic surfactant electrokinetic chromatog; enantiomer detn electrokinetic chromatog; racemate sepn dipeptide surfactant pseudostationary phase

IT Resolution (separation)
(chromatog.; enantiomer determination by electrokinetic chromatog. using polymerized dipeptide anionic chiral surfactants as pseudostationary phases)

IT Chromatography
(electrokinetic; enantiomer determination by electrokinetic chromatog. using polymerized dipeptide anionic chiral surfactants as pseudostationary phases)

IT Enantiomers
(enantiomer determination by electrokinetic chromatog. using polymerized dipeptide anionic chiral surfactants as pseudostationary phases)

IT 525-66-6, (.+-.)-Propranolol 4199-09-1, (-)-Propranolol 5051-22-9, (+)-Propranolol 13655-52-2, (.+-.)-Alprenolol 23846-71-1, (-)-Alprenolol 23846-72-2, (+)-Alprenolol 35193-63-6, (.+-.)-1,1'-Binaphthyl-2,2'-diyl hydrogen phosphate 35193-64-7, (+)-1,1'-Binaphthyl-2,2'-diyl hydrogen phosphate 39648-67-4, (-)-1,1'-Binaphthyl-2,2'-diyl hydrogen phosphate 53531-34-3 60646-30-2 65487-67-4
RL: ANT (Analyte); ANST (Analytical study)
(enantiomer determination by electrokinetic chromatog. using polymerized dipeptide anionic chiral surfactants as pseudostationary phases)

IT 145228-96-2 **192448-35-4**
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(enantiomer determination by electrokinetic chromatog. using polymerized dipeptide anionic chiral surfactants as pseudostationary phases)

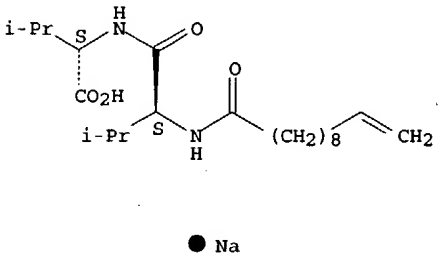
IT **192448-35-4**
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(enantiomer determination by electrokinetic chromatog. using polymerized dipeptide anionic chiral surfactants as pseudostationary phases)

RN 192448-35-4 HCAPLUS
CN L-Valine, N-(1-oxo-10-undecenyl)-L-valyl-, monosodium salt, homopolymer (9CI) (CA INDEX NAME)

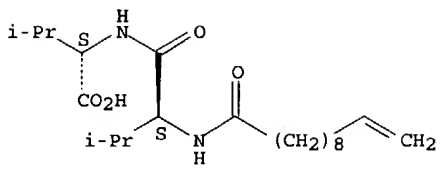
CM 1

CRN 192448-34-3
CMF C21 H38 N2 O4 . Na

Absolute stereochemistry. Rotation (-).



IT **192448-35-4**
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(enantiomer determination by electrokinetic chromatog. using polymerized dipeptide anionic chiral surfactants as pseudostationary phases)



● Na

IT **192448-35-4P 204689-92-9P**
RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of polymerized N-undecenoylamino acids and -peptides as pseudostationary phases in electrokinetic capillary electrophoresis for racemate resolution)

IT **220928-25-6P 220928-26-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of polymerized N-undecenoylamino acids and -peptides as pseudostationary phases in electrokinetic capillary electrophoresis for racemate resolution)

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L20 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:576060 HCAPLUS
DN 135:153248
ED Entered STN: 09 Aug 2001
TI Polymerized oligopeptide-surfactant chiral micelles
IN **Warner, Isiah M.; Billiot, Eugene J.; Shamsi, Shahab A.; Thibodeaux, Stefan J.**
PA Board of Supervisors of Louisiana State University and Agricultural and Mechanical College, USA
SO U.S., 22 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM G01N027-26
ICS B01D011-00; B01D011-04; B01D005-08
NCL 204451000
CC 35-4 (Chemistry of Synthetic High Polymers)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6270640	B1	20010807	US 1999-296351	19990422 <--
	US 2001051703	A1	20011213	US 2001-876304	20010607 <--
PRAI	US 1998-126431P	P	19980429	<--	
	US 1999-296351	A3	19990422		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 6270640	ICM	G01N027-26
	ICS	B01D011-00; B01D011-04; B01D005-08
	NCL	204451000

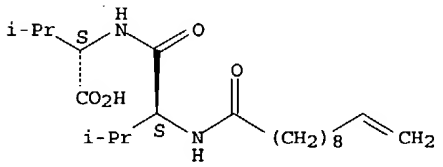
AB Chiral sepns. can be enhanced through the use of polymerized dipeptide-surfactant or oligopeptide-surfactant chiral micelles. Because polymerized micelles eliminate much of the complex dynamic behavior associated with conventional micelles, polymerized chiral micelles have stronger chiral recognition properties than do otherwise-identical, "conventional" or non-polymerized chiral micelles. Recovery of chiral ligands from polymerized chiral micelles is often easier, as the chiral ligands may typically be recovered by simple extraction with an appropriate organic solvent. By contrast, recovering the solute from a conventional, non-polymerized micellar medium by extraction with an organic solvent frequently results in the formation of troublesome emulsion systems. Polymerized chiral micelle systems are therefore beneficial in both preparative-scale and process-scale sepns. Polymerized chiral micelles have no critical micelle concentration, allowing lower concns. to be used in micellar electrokinetic capillary chromatog., which in turn reduces the otherwise deleterious heat that can be generated. Many polymerized dipeptide-surfactant or oligopeptide-surfactant chiral micelles have superior separation properties as compared to polymerized amino

acid-surfactant chiral micelles. Poly(sodium N-undecylenyl-L-valine-L-valine) was used in electrokinetic chromatog.
ST polymd oligopeptide surfactant chiral micelle enantiomer sepn
IT Capillary electrophoresis
Liquid chromatography
(polymerized oligopeptide-surfactant chiral micelles)
IT **192448-35-4P 204689-90-7P 204689-91-8P**
204689-92-9P 243843-88-1P 352711-88-7P
352711-90-1P 352711-92-3P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polymerized oligopeptide-surfactant chiral micelles)
IT 602-09-5, (.+-.)1,1'-Bi-2-naphthol 35193-63-6
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(polymerized oligopeptide-surfactant chiral micelles)
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Anon; JP 4149205 1992
(2) Anon; JP 4149206 1992
(3) Armstrong, D; Anal Chem 1987, V59, P84A HCAPLUS
(4) Shahab, A; Analytical Chemistry 1997, V69(15)
(5) Warner; US 5770084 1998 HCAPLUS
IT **192448-35-4P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polymerized oligopeptide-surfactant chiral micelles)
RN 192448-35-4 HCAPLUS
CN L-Valine, N-(1-oxo-10-undecenyl)-L-valyl-, monosodium salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 192448-34-3
CMF C21 H38 N2 O4 . Na

Absolute stereochemistry. Rotation (-).



IT **192448-35-4P 204689-90-7P 204689-91-8P**
204689-92-9P 243843-88-1P 352711-88-7P
352711-90-1P 352711-92-3P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polymerized oligopeptide-surfactant chiral micelles)

L20 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1998:136125 HCAPLUS
DN 128:230655
ED Entered STN: 09 Mar 1998
TI Chiral Separations Using Dipeptide Polymerized Surfactants: Effect of Amino Acid Order
AU **Billiot, Eugene**; Macossay, Javier; **Thibodeaux, Stefan**; **Shamsi, Shahab A.**; **Warner, Isiah M.**
CS Department of Chemistry, Louisiana State University, Baton Rouge, LA, 70803, USA
SO Analytical Chemistry (**1998**), 70(7), 1375-1381
CODEN: ANCHAM; ISSN: 0003-2700
PB American Chemical Society
DT Journal
LA English
CC 34-3 (Amino Acids, Peptides, and Proteins)
AB Chiral sepns. using various polymerized dipeptide surfactants in electrokinetic capillary chromatog. (EKC) are investigated. The two main dipeptide surfactants used in this study were sodium N-undecylenyl-L-

valine-L-leucine (L-SUVL), and sodium N-undecylenyl-L-leucine-L-valine (L-SULV). These studies were performed in order to determine if the order of amino acids in dipeptide surfactants is important in terms of chiral recognition and sepns. Both the monomer and the polymer of these two surfactants were compared for the separation of two model atropisomers, (.+-.)-1,1'-bi-2-naphthol (BOH) and (.+-.)-1,1'-bi-2-naphthyl-2,2'-diyl hydrogen phosphate (BNP). Some advantages and disadvantages of the polymer relative to the monomer are discussed. Four other surfactants, the polymers of sodium N-undecylenyl-L-leucine-L-leucine (L-SULL), sodium N-undecylenyl-L-valine-L-valine (L-SUVV), sodium N-undecylenyl-L-valine (L-SUV), and sodium N-undecylenyl-L-leucine (L-SUL), were also used in this study, and their performance was compared to that of poly(L-SULV). These data show conclusively that the order of amino acids in dipeptide surfactants has a dramatic effect on chiral recognition. These investigations indicate that poly(L-SULV) provides the best enantioselectivity among the four dipeptide and two single amino acid surfactants for the separation of BNP and BOH. The advantages of poly(L-SULV) are demonstrated via the ultrafast separation of the enantiomers of BNP and BOH in less than 1 min.

ST polymer dipeptide surfactant prepn enantiomer sepn; undecylenyldipeptide polymer electrokinetic capillary chromatog resoln; electrokinetic capillary chromatog polymer dipeptide surfactant; chiral recognition polymer dipeptide surfactant prepn

IT Surfactants
(dipeptide; effect of amino acid order on chiral sepns. using dipeptide polymerized surfactants)

IT Chiral recognition
Micellar electrokinetic capillary chromatography
Resolution (separation)
(effect of amino acid order on chiral sepns. using dipeptide polymerized surfactants)

IT Dipeptides
RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(surfactants; effect of amino acid order on chiral sepns. using dipeptide polymerized surfactants)

IT 145228-96-2P 175357-43-4P **192448-35-4P 204689-90-7P 204689-91-8P 204689-92-9P**
RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(effect of amino acid order on chiral sepns. using dipeptide polymerized surfactants)

IT 602-09-5P, (.+-.)-1,1'-Bi-2-naphthol 18531-94-7P, (+)-1,1'-Bi-2-naphthol 18531-99-2P, (-)-1,1'-Bi-2-naphthol 35193-63-6P, (.+-.)-1,1'-Binaphthyl-2,2'-diyl hydrogen phosphate 35193-64-7P, (+)-1,1'-Binaphthyl-2,2'-diyl hydrogen phosphate 39648-67-4P, (-)-1,1'-Binaphthyl-2,2'-diyl hydrogen phosphate
RL: PUR (Purification or recovery); PREP (Preparation)
(effect of amino acid order on chiral sepns. using dipeptide polymerized surfactants)

IT 61-90-5, L-Leucine, reactions 72-18-4, L-Valine, reactions 112-38-9, 10-Undecenoic acid 3303-31-9, L-Leucyl-L-leucine 3918-94-3, L-Valyl-L-valine 3989-97-7, L-Valyl-L-leucine 13588-95-9, L-Leucyl-L-valine
RL: RCT (Reactant); RACT (Reactant or reagent)
(effect of amino acid order on chiral sepns. using dipeptide polymerized surfactants)

IT 110661-49-9P 144597-01-3P 175357-31-0P **192448-34-3P 204689-87-2P 204689-88-3P 204689-89-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(effect of amino acid order on chiral sepns. using dipeptide polymerized surfactants)

RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD

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